software AG

LEVERAGING YOUR EXISTING INVESTMENTS

AUTUMN 2010 EDITION

TECHniques

TECHNICAL TIPS AND TRICKS FOR THE SOFTWARE AG COMMUNITY

INSIDE THIS ISSUE:

DEAR SOFTWARE AG TECHNOLOGY COMMUNITY MEMBER,

Welcome to the Autumn Edition of TECHniques! In the current tough economic climate, you sometimes hear people say how it's important to make the most of what you have. It's smart advice and one we have followed with this edition, which is focused around how you can leverage your existing IT investments, whether this is enhancing their potential, extending their accessibility or integrating these with other technologies.

Our lead article from Guido Falkenberg takes a look at how the approaches to improving your existing infrastructure, "Modernization", has evolved over time and is now focused around making existing applications part of their process improvement and IT transformation strategies.

We've an interesting story from the innovative Florida State College at Jacksonville, which is making Adabas and Natural data available across mobile devices such as iPADs and iPhones, whilst Patrick Gould highlights some of the benefits NaturalONE can bring to your Natural development teams.

Wolfgang Weiss explores ways in which Data Archiving for Adabas can address storage and compliance challenges and there is an interview with Bernd Gudat, who heads up our User Groups, which are one of the main ways in which customers can share ideas around how to do more with their Adabas and Natural deployments.

Finally, you might notice that some TECHniques stories are written by non-Software AG staff, such as Adabas and Natural consultants from around the world. We're very grateful to receive these contributions, and invite you to be a part of the newsletter as well. Just send your thoughts to: **technologycommunity@softwareag.com**. We can translate articles into English or perhaps help you with writing, so please get in touch. One way to have your say is by answering a simple Software AG Communities survey at: **www.softwareagsurveys.com**. Just copy and paste this code: **65F068C35B499DBC** to start!

Happy reading!

Gerd Schneider | VP Marketing and Communities

RETHINK YOUR MODERNIZATION APPROACH

By Guido Falkenberg, VP Enterprise Transaction Systems, Software AG

In conversations with our customers over the last five years, we have observed a shift in how the Legacy or Application Modernization market and our offerings are perceived.

Back in 2005, Legacy or Application Modernization was often driven by a technical and application-centric approach. IT was looking in a broad sense at how it could improve the application from a technology standpoint.

Software AG started delivering products at that time to meet this demand. The offerings focused on making the plumbing and restructuring of applications easier, or SOA-enabling programs, or providing new browser-based interfaces to end-users. While this was the right step at the time, it no longer meets today's needs.

A MORE BUSINESS-CENTRIC, HOLISTIC APPROACH

We now see many of our customers taking a broader view in moving their applications towards a modern environment—one that includes current and future needs.

Gaining a better understanding of the existing application portfolio, considering optimizing the IT infrastructure, planning to address the next generation workforce, and adopting a more business-process driven approach are new topics that redefine application modernization.

Software AG calls this broader approach, which includes the principles of application and legacy modernization, 'IT Transformation.' This approach provides a more business-centric and holistic view of what IT needs to deliver.

WHAT'S DRIVING IT TRANSFORMATION?

Before we explore this aspect further, let's first explore the key drivers of IT Transformation. Any transformation strategy needs to address the key strategic business drivers.

As heard from our customers, key strategic business drivers include:

- Deciding whether packaged application consolidation or best-of-breed is the right approach in context of flexibility, costs and competitive advantage
- Gaining transparency in the application portfolio and how they are contributing to business processes
- Understanding the impact of interfaces and a changing application portfolio (for example, purchase new, merger and acquisitions, cloud applications, replace obsolete)
- Evaluating the role that the mainframe can play in the future application strategy
- Establishing real-time enterprise and business models
- Consolidating IT infrastructure to achieve standardization and a more cost-efficient operation

HOW HAVE BUSINESSES TRANSFORMED?

Software AG customer examples help understand transformation capabilities:

- Integrate new and existing applications, support future change

  CUSTOMER: Massdiscounters
  http://www.softwareag.com/
  corporate/Customers/References/
  Massdiscounters_page.asp

- Bring business processes closer to end-user and customer

  CUSTOMER: Apollo-Optik
  http://www.softwareag.com/
  corporate/Customers/References/
  ApolloOptik_page.asp

- Gain transparency in business process execution and its KPIs

  CUSTOMER: American Community Mutual Insurance
  http://www.softwareag.com/
  corporate/Customers/References/
  AmericanCommunityMutual
  Insurance_page.asp

- Increase agility of existing applications, keep pace with change and growth

  CUSTOMER: HSBC
  http://www.softwareag.com/
  corporate/Customers/References/
  HSBCBankTurkey_page.asp

Find these customer case studies and more at www.softwareag.com.

When it comes to transformation solutions, great functional capabilities are not enough. Even more important are the first steps toward implementation and showcasing the evolution of an organization as it builds up its transformation roadmap to deliver clear business value both in the short-term (quick-wins) and long-term.

In order to make the right decisions, it is necessary to gain a better understanding of the existing application portfolio in context of value, future agility, risk and costs.

TAKING THE FIRST STEP: ASSESSMENT

With the new capabilities of the ARIS product portfolio, Software AG now provides solutions for Enterprise Architecture Management that help companies achieve application portfolio transparency and governance. This supports the decision process when evolving applications into the future.

Enterprise Architecture Management provides a holistic view of the IT landscape that includes business process, application, information, interface and infrastructure components. Once they are documented, assets can be used to manage the change and planning process for a custom-tailored IT transformation roadmap into a to-be IT landscape.

This first step—the assessment—provides a solid foundation for defining an IT transformation.
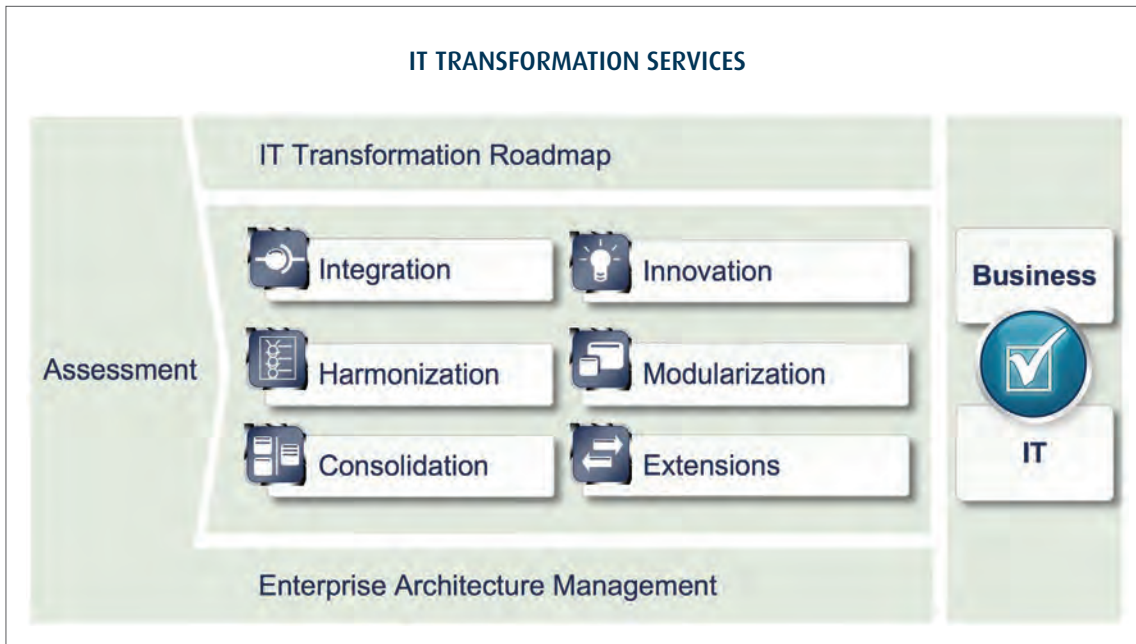
BUILDING THE IT TRANSFORMATION AND MODERNIZATION ROADMAP

The assessment leads to a value-oriented transformation roadmap, leveraging various IT transformation components and delivering quick-wins and long-term business success.

Roadmap components may include:

- **Modularization.** Decompose the existing application functionality into flexible modules in order to react faster to changing and new business requirements and rules. For example, make the policy management functionality centrally available to all sales channels while eliminating functional redundancies.

- **Integration**. Reuse existing functionality from various business domains by simply making them available as integration points. For example, integrate ERP (such as SAP) with custom-developed applications (such as Natural).

- **Harmonization.** Create synergies by establishing architectural and technological standards throughout the entire IT landscape. For example, set enterprise-wide standards for all business-centric user interfaces or common development tools and processes for application programmers.

- **Consolidation.** Lower operation and maintenance costs by reducing complexity in hardware and software landscapes through consolidation. For example, rehost applications to another hardware platform such as Mainframe, UNIX, Linux or Windows or consolidating applications by converting COBOL or PL/1 to Natural.

- **Extension.** Secure existing investments by extending IT assets to do more, following a clearly defined and enforced governance model. For example, add new business rules to backend applications.

- **Innovation:** Profit from new architectural concepts and technological innovations. Stay ahead of the competition with new business models driven by IT innovations. BPM strategy for new innovative end-to-end processes across heterogeneous applications and business partners.

IT TRANSFORMATION SERVICES

IT Transformation Roadmap

Assessment

Integration	Innovation
Harmonization	Modularization
Consolidation	Extensions

Enterprise Architecture Management

Business

IT

ADDRESS CURRENT NEEDS WHILE BUILDING A BASE FOR THE FUTURE

From a technical point of view, the customer accomplishments listed on the first page of this article can be achieved through transformation and modernization technologies based on Software AG products. These address current needs and provide a path to the future by also addressing upcoming needs such as: real-time enterprise, dynamic business processes, and support for a mobile workforce. Software AG improved its technology to give Natural and Adabas customers better capabilities toward achieving this goal.

Technology improvements include:

- **Enterprise Architecture Management** to compile information about the IT landscape; including application, database, interfaces, hardware and software, organization, business processes and so on. **Solution: ARIS**

- **Integration with Business Process Management (BPM)** allows the design and automation from people-, document- or system-centric workflows, fully leveraging functionality and data that come from Natural and Adabas or from any other enterprise application or business partner. **Solution: webMethods, ARIS**

- **Application Data and Partner Integration** to connect to any kind of custom-developed, packaged or cloud application (e.g., SAP, Java, .NET, COBOL or SalesForce). Also, the integration with a broad range of databases (e.g., Oracle, SQL Server), content repositories (e.g., FileNet, Documentum) and electronic data exchange standards (e.g., EDI, SWIFT). **Solution: webMethods**

- **Integrated Development Environment** based on Eclipse for transactional, SOA and BPM-oriented programming including the harmonization of development tools and processes. **Solution: NaturalONE, webMethods, CentraSite**

- **Modernization Tools** that are automating tasks to better understand the complexity of existing applications, test automation, improving the code quality, automatic documentation or modularizing the business logic. **Solution: NaturalONE, Natural Engineer**

- **Natural Application and SOA Lifecycle Management** in one environment providing full transparency and control supporting governance guidelines and policies. **Solution: Centrasite**

- **IT Operation and Infrastructure** provides platform rehosting flexibility and operational efficiency to choose the best platform for the business application (e.g., mainframe, UNIX, Linux, Windows).

- **Central Infrastructure Monitoring** to have full control of a distributed application architecture and its health status. **Solution: Optimize for Infrastructure**

READY FOR THE FUTURE WITH CURRENT INVESTMENTS

With this new outlook, you can think beyond the current boundaries of application modernization. This will help you to transform your business applications into a solution platform that meets your current and future requirements while leveraging valuable investments of your current application portfolio.

To find the Software AG
office nearest you, please visit:
www.softwareag.com

PATRICK BÜCH
Product Manager
Enterprise Architecture Management
Software AG

"A process oriented approach helps standardize technologies company-wide."

Patrick Büch is a product manager for Enterprise Architecture Management at Software AG. His recommendation is to integrate Software AG's Enterprise Architecture Management Solution in an organizational manner. Regarding implementation, he says: "Start in an area that's well organized. Then it's just a matter of gradually rolling out the EAM solution throughout the company."

CULTIVATED IT LANDSCAPES

By Patrick Büch, Product Manager, Enterprise Architecture, Software AG

With Enterprise Architecture Management (EAM), companies can document, manage, plan and develop their IT landscapes. But EAM cannot make a difference without the integration of business processes.

Uncontrolled growth is rampant in the IT departments of many companies. Over the course of years, a complex IT infrastructure landscape has evolved in both hardware and software, often with multiple interfaces and system breaches. For IT to be able to respond flexibly to business demands, and thus business strategy, a high level of standardization and harmonization must be achieved in the IT landscape. This can reduce support and maintenance costs while expanding the range of options. Software AG's solution for EAM is the answer to this challenge.

WHO NEEDS SOFTWARE AG's SOLUTION FOR EAM?

Any business that seeks to operate in a flexible manner with IT support needs such a solution. EAM is not just for major corporations; it also appeals to medium-sized firms. Here as well, business processes can only operate as efficiently as the existing IT system that supports them. That is why EAM is an IT-management issue. There are many actors involved in the development of an Enterprise Architecture. Conventional roles include the IT architect, the landscape planner and the system manager. Process managers, works councils and data security officers also play a part in an EAM solution.
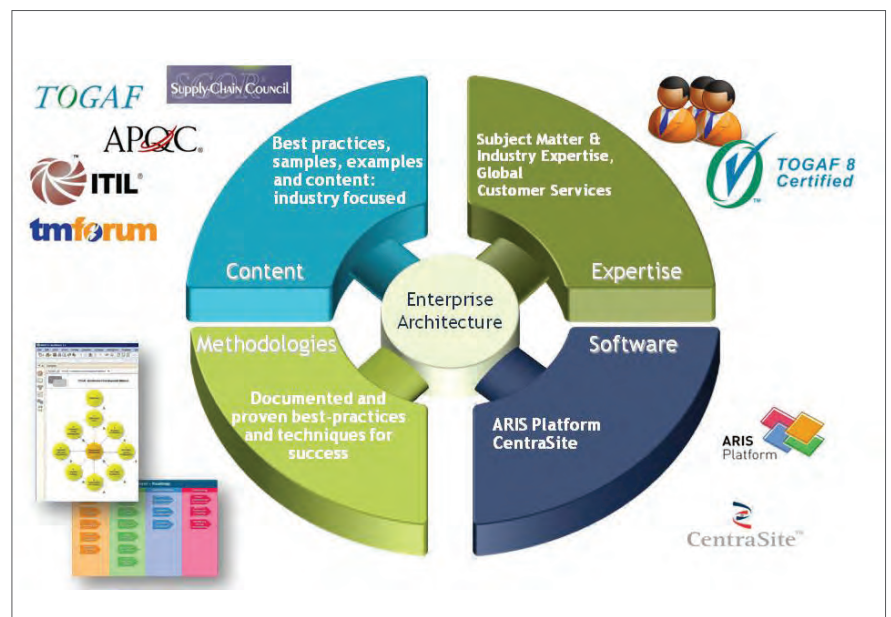
Software AG's Enterprise Architecture Management Solution

WHAT SOLUTION POTENTIAL DOES ENTERPRISE ARCHITECTURE MANAGEMENT OFFER?

EAM describes the IT landscape and the entire corporate architecture in a documentation record. The centerpiece is the integrated repository, which all participating actors work on. They can then evaluate dependencies, find redundancies and analyze the effects of a system migration. This makes it possible to harmonize and standardize the IT technologies and application systems. This increases transparency, ensures faster response to changes and allows for more planning reliability. Interfaces and system breaches are eliminated. The results include lower costs for maintenance, training, operations and implementation, among other things.

WHAT ARE THE IMPLEMENTATION PREREQUISITES?

The prerequisite is seamless linkage with business processes. EAM ensures that the IT is focused on the business at hand. It records the IT landscape data in a centralized manner so that the most current information is available to all interested parties. For example, it could apply to the implementation of an IT strategy based on a business strategy, the establishment of a target architecture and the associated planning steps necessary, and when applying IT-related decisions to project management. In all respects the ARIS method and the Enterprise Architecture Framework it contains are based on an object-oriented approach pertaining to the re-utilization of architecture artifacts, thereby allowing architectures to be integrated, documented and managed.

WHAT CAN I DO TO ENSURE SUCCESS?

A tool must be accepted within the company; otherwise, it might be ignored. For that reason the initiators should create a broad EAM user group. The participating parties have to be sure the solution provides added value, which of course requires communication and planning. Training helps obtain a better understanding of the added value an EAM solution can offer. Therefore, it makes sense to "start small." Ideally, one should begin with the IT departments in which there is already good documentation of the IT landscape. Typically, the data may be on hand in Excel, Access or other tools, but it is then migrated to the ARIS repository within the scope of a given project.

To learn more about Software AG's Solution for EAM, visit **www.softwareag.com** or the ARIS community at **www.ariscommunity.com**.

A development matrix for the IT landscape, including deployment locations and planning status

An example of an application portfolio, depicting the implementation strategy in the form of quadrants with implementation recommendations
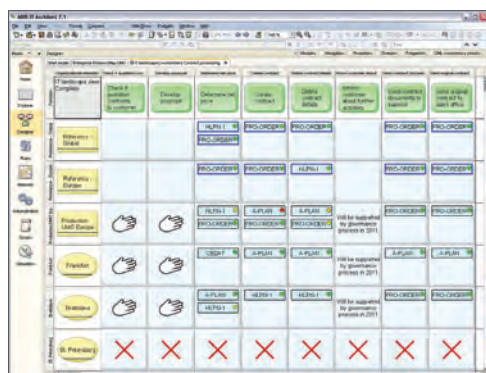
IMPLEMENTATION IN FIVE STEPS

Step 1: First, compile information about the IT landscape, including hardware and software, organization, processes, IT system descriptions, etc. It is critical that such documentation be accurate and up-to-date. Additionally, all existing data sources must be positively identified, and the rules for transfer into the ARIS repository must be defined.

Step 2: Now import the information you have obtained into the EAM database of the ARIS repository. Permanent data, such as that originating from CMDB (Configuration Management Database) systems or project management solutions, must be supplied directly. If necessary, you can depict the information graphically for a quick overview of the situation.
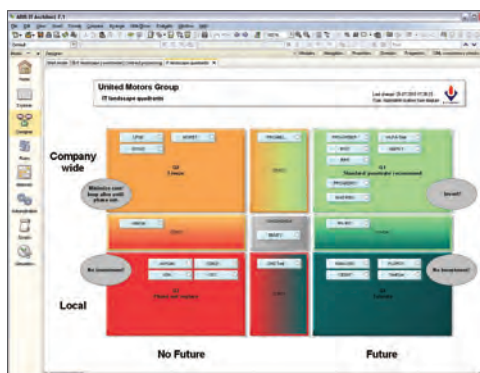
Step 3: This is the phase in which you define, establish and document the IT governance processes required within an EAM solution. You should be able to answer the following questions: Who has data sovereignty? Who requests systems and who connects them? Who has access rights to what type of data? How does process management function with the IT? Who is involved in the system life cycle?

Step 4: It is now time to roll out the EAM software, including the governance processes and measures. The IT architects and architecture managers determine and verify to what extent the system descriptions are satisfied, doing so with the help of analyses, reports, status messages, etc.

Step 5: EAM requires a broad user group, so all the concerned groups should cooperate. Thus it is important to do some internal marketing and persuade users that working with the new tool is a worthwhile effort. The objectives must be strongly conveyed!

To find the Software AG office nearest you, please visit:
www.softwareag.com

OPTIMIZE FOR INFRASTRUCTURE

By Dieter W. Storr, Storr Consulting, Inc.

Currently, companies must write or purchase several monitor programs to gather statistical data to evaluate the performance of Software AG products. They use this data to improve their processes. Software AG and other vendors offer single monitor software on the mainframe—such as Review, Adabas Statistic Facility, Adabas Online System, Adabas Event Replicator Subsystem, Apas/Insight, System Management Hub, and Trim.

Some may find it awkward to get performance data from a green screen on the mainframe and then switch over to the PC for additional information on Windows-based Software AG products. For example, if you monitor Event Replication for Adabas on the mainframe, you must close the Adabas Event Replicator Subsystem screen and open the Adabas Online System screen to get additional information for the same product.

Last year, Software AG introduced its new tool: Optimize for Infrastructure: the Mainframe Edition. For many years, webMethods has used its Business Activity Monitoring (BAM) tool, which includes Optimize for Process, Optimize for SAP, and Optimize for B2B. After the merger with

webMethods, Software AG updated and improved the existing Optimize product for monitoring its enterprise products in real-time. This tool is UNIX- or Windows-based and collects data from Software AG's products such as Adabas, EntireX, Event Replicator for Adabas, Adabas Delta Save, Natural, Entire Net-Work and Adabas Fastpath.

The benefit of this solution is that you can observe your performance data from a single Web-based dashboard by using your favorite Web browser.

OPTIMIZE ARCHITECTURE

The Software AG products: Adabas, Event Replicator for Adabas, Com-plete, Entire Net-Work, Natural, Entire System Server, ApplinX and EntireX are already equipped

with 'hooks' to get performance data if the latest versions are installed. In some cases, small system modifications (ZAPs) are necessary.

One or more special Natural RPC servers on the mainframe (Data Collector) are necessary to collect the data from the above-mentioned products...through EntireX Broker (webMethods Server)...to a JMS Queue...and on to the Analytic Engine for interpretation and application of KPI rules. The Analytic Engine stores the data into a relational database (see figure 1). For example, a batch Natural RPC server monitors all global Natural components; a CICS Natural RPC server monitors in general only local environment-specific Natural components. If EntireX Broker is not available on one of the monitored platforms, the EntireX Broker stubs (EntireX Mini Runtime) must be installed.

Optimize for Infrastructure comes with more than 600 predefined Key Performance Indicators (KPIs), which can be selected and activated to collect the data you want to monitor and analyze. You can also create rules, send predefined alerts or start activities by using Web services.

In addition to the data collection, Optimize implementation performs other main functions such as data communication, data processing and analysis, data storage and data presentation.
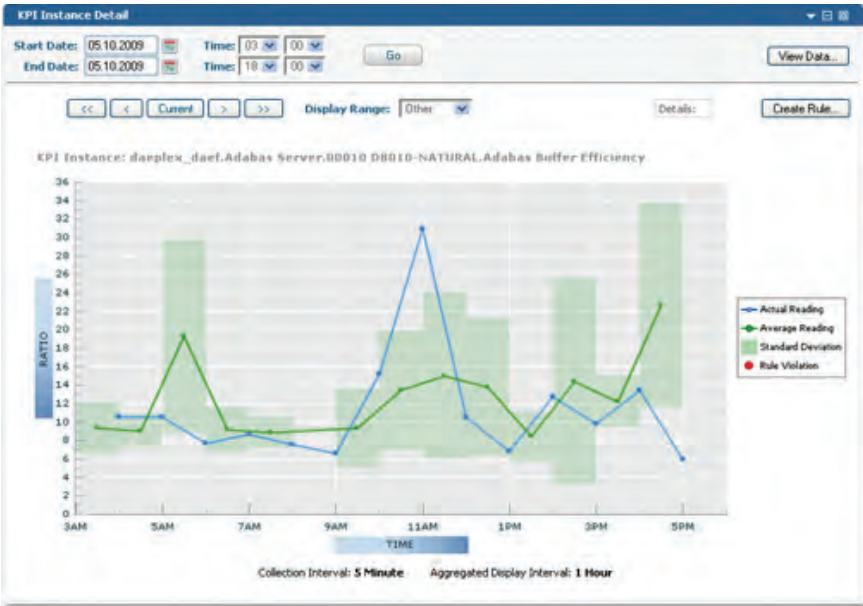
Figure 1: Optimize Architecture
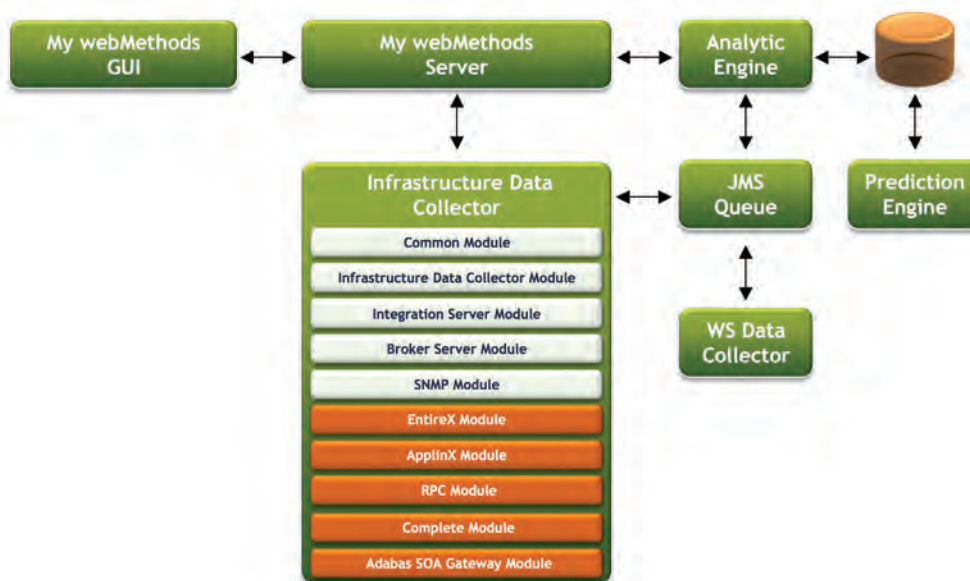
HOW TO MONITOR A COMPONENT

After you run the discovery process to ascertain the products running in your environment, select product-instances and KPIs you want to see, you can monitor the KPIs and display details. Figure 2 displays details of one Adabas KPI.

Figure 2: Details of one Adabas KPI

You can also compare some KPIs from Adabas. Figure 3 demonstrates how CPU-usage is running synchronized with the number of Adabas calls and Buffer-Flushes.

Figure 3: Comparing some KPIs from Adabas
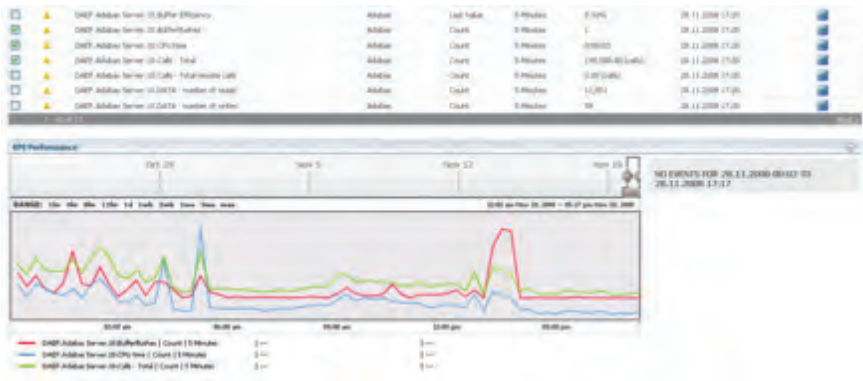
SOFTWARE AG IS IMPROVING THIS PRODUCT

Customers will appreciate that Software AG extended the Business Activity Monitoring solution from webMethods for existing products. With a single monitor, you save time monitoring Software AG environments. It is also good to know that Software AG does not plan to replace existing monitor tools with Optimize for Infrastructure. Changes in existing monitor tools will make it possible to collect performance information from existing tools and enable its analysis with new KPIs. In addition, Software AG plans to add more functions, enabling Optimize for Infrastructure to analyze the reason for long response times and determine which of their products in the transaction may be improved.

Software AG likes to leverage its customers' investments by acquiring or developing new products or enhancing functionalities of existing products. Software AG also announced in July 2010 in the German magazine 'Computerwoche' that it has 'Big Plans with Adabas and Natural.'

DATA BACKUP, PARTITIONING AND ARCHIVING:
MEETING DIFFERENT NEEDS

By Wolfgang Weiss, Senior Product Manager, Software AG

DATA BACKUP VS. DATA ARCHIVING?

By now, you probably know the basics of data backup. It's a copy or snapshot of data. It can be retrieved if a working copy is corrupted, destroyed or needed for a year-end audit or other activity. A backup does not differentiate between current and historical data—it just copies an entire database or files from it.

Most organizations have implemented some type of data backup solution, whether it's homegrown or "snapshot technology" from a storage vendor.

Data archiving, on the other hand, is the process of moving data that is no longer actively used to a separate storage device for long-term retention. You could build your archive by stacking backup copies on a shelf. But the value of an archive lies in its ability to recall and process the information stored within.

BACKUP AS AN ARCHIVING SOLUTION?

Because a backup is a snapshot in time, it's most successful when a restore is needed and an application is available in the same form or data is accessible via standard tooling. However, using backup for long-term storage and retrieval of data has drawbacks:

· Increased storage requirements. If original data remains in the data source, storage requirements will grow, resulting in increased costs.

· Slowed system performance – As data volume grows, CPU consumption, time to process information and conduct backup and restores increase.

· Costly, labor-intensive, potentially inconsistent data retrieval – Applications and business data continually evolve, so the longer a backup copy exists, the more difficult it becomes to use the data in current applications.
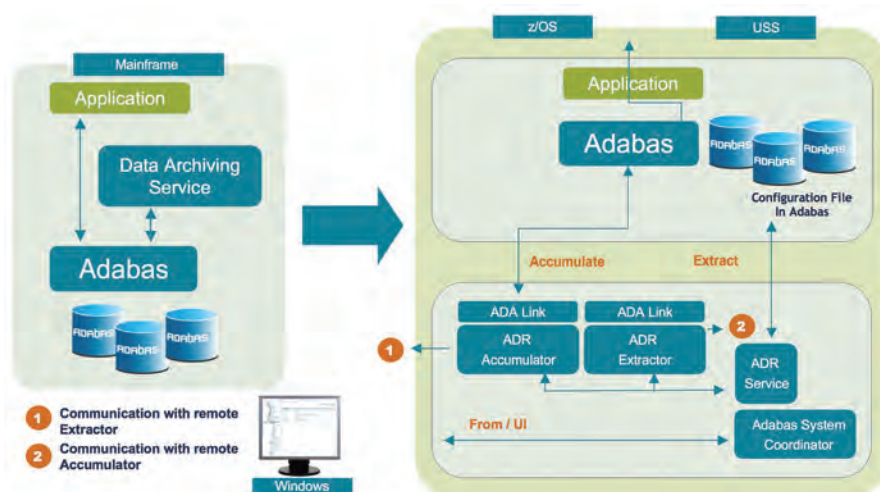
IS ADABAS VISTA A SOLUTION FOR ARCHIVING?

Adabas Vista can be used to separate current data from seldom-used or historical data. It allows you to partition or split large Adabas files into manageable pieces. Once partitions are created, information can be categorized and stored there. Creating partitions is easy, and Adabas Vista is a valuable tool for helping to manage data, but it isn't a complete answer for data archiving; and it is manual work to create partitions.

File translation, an Adabas Vista feature, can be used to change database IDs and file numbers dynamically within Adabas applications at run-time. The file numbers are translated based on the translation information supplied to Adabas Vista. This makes it easy to access data in different stages that an application follows as it progresses into production without changing the application. However, manual work is still required to maintain an "archive" based on Adabas Vista.

INTRODUCING DATA ARCHIVING FOR ADABAS

In response to a need for an archiving tool that minimizes manual effort, reduces costs and manages data in a safe and intelligent way, Software AG developed an intelligent tool for dealing with seldom-used and historical data: Data Archiving for Adabas.

FIGURE 1: Data Archiving for Adabas – Mainframe Architecture
A deeper look into a z/OS installation. The callout on the right shows detail from the left.

Data Archiving for Adabas moves historical data off the production side and places it in a storage "vault." It addresses data management tasks beyond traditional database backups, organizational managed archiving procedures and potentially costly IT-based processes. The solution meets today's requirements to keep data available for long periods of time, even decades, to comply with legal regulations and internal audits.

Offering world-class functionality, Data Archiving for Adabas gives you these benefits over other backup and archiving solutions:

· As an integrated solution in the Adabas family, it leverages internal knowledge from Adabas. When Adabas needs to enhance the way it stores data or describes business data through its metadata, the archiving solution learns it and works accordingly. Maintenance typical for homegrown approaches is dramatically reduced.

· The solution automatically checks for data structure changes, creates a new version of the data and archives it along with its metadata. It eliminates the need to create procedures to handle this.

· You no longer need to manually manage script changes, programs to keep track of correct definitions of backup actions and their correct execution and termination. Define your archiving actions once, then store and run it unattended on a schedule or ad-hoc, saving time.

· Effective tooling allows you to easily search for and recall historical data in the archive or vault without programming. There's no need to recall large volumes of data just to view a subset. A recall restores only the necessary data to Adabas based on the result of a preceding query.

· Data Archiving for Adabas provides various validation capabilities, from simply verifying that an archive exists, to validating that the data can be recalled and applied to a database.

· When archived, data can be deleted from the source either manually or automatically. With less data to be searched and processed, OLTP performance improves, less CPU is consumed, disk space is saved, and DASD costs are reduced.

· You can reduce storage costs by up to 30 percent by archiving seldom-used data on a cheaper device. This helps you meet regulatory requirements cost effectively.

COMPLEMENTARY SOLUTIONS FOR DIFFERENT NEEDS

A final word on Adabas Vista for data archiving: Adabas Vista does play an important role in the data lifecycle. Seldom-used data can be archived to an intermediate store—Adabas— which in turn can be an Adabas Vista partition, with the advantage that the application can still access data transparently.

By moving data to an intermediate store, the production database stays focused on current data, while allowing the application to access the intermediate repository to retrieve infrequently used data. That data can later be archived to the offline store or vault. If data needs to be recalled from vault, the target can be a partition of an Adabas file, allowing the archived data to be accessed from an application and any other tool based on Natural, SOAP or ODBC/JDBC.

So consider both solutions—Adabas Vista and Data Archiving for Adabas—because they complement each other yet serve different needs.

COMING SOON!
Archiving for Adabas ROI Calculator

We have developed a calculator to help you estimate your ROI for Data Archiving for Adabas. This easy-to-use tool will help you gather information on tangible IT costs such as data storage, CPU usage and backup costs, and determine how long it would take for Archiving for Adabas to pay for itself—plus predict the continued savings. Stay tuned for details on the upcoming webinar and availability of the new ROI calculator at www.softwareag.com.

To find the Software AG office nearest you, please visit:
www.softwareag.com

NATURAL:
HOW TO PRODUCE THE LAST BUSINESS DAY OF A GIVEN MONTH

By Steve Robinson, Consultant, S.L. Robinson and Associates, Inc.

In my current assignment, my client needed a bit of code that, starting with a given date would produce the last business day for that month. The logic suggested for the code was going to be very expensive to run. It involved tables of days in every month, a file to be created with valid business days, and so on. Since this code was going to be heavily used, efficiency was an important consideration. I/O to access files is expensive. Another solution would have to be found. It turns out that the problem is really quite simple. I will address the problem in stages, below, with each stage bringing us closer to the desired solution.

THE STARTING PROGRAM

We will start with an A8 date, which will be passed by a CALLNAT'er. Here is the starting program:

```
* THIS PROGRAM HAS A DATE IN #DATE.
* WE WILL PRESUME THE DATE HAS BEEN VALIDATED
*
* WE REQUIRE THE LAST BUSINESS DAY OF THE MONTH
*
DEFINE DATA LOCAL
1 #DATE (A8) INIT <'20100214'>
1 #LAST-BIZ-DAY (A8)
1 #DAY-WEEK (A10)
1 #DATE-D (D)
END-DEFINE
*
INCLUDE AATITLER
*
CALLNAT 'DATEB02' #DATE #LAST-BIZ-DAY
*
MOVE EDITED #LAST-BIZ-DAY TO #DATE-D (EM=YYYYMMDD)
MOVE EDITED #DATE-D (EM=NNNNNNNNNN) TO #DAY-WEEK
*
WRITE 5T 'FOR THE GIVEN DATE: ' #DATE  (EM=XXXX-XX-XX)
//
     5T 'THE LAST (BUSINESS?) DAY OF THE MONTH IS: '
          #LAST-BIZ-DAY (EM=XXXX-XX-XX) /
     5T 'WHICH IS A ' #DAY-WEEK
*
END
```

A couple of notes about the above program:

· AATITLER is just a Copycode I use to replace the default title (it is just a WRITE TITLE statement).

· The edit mask NNNNNNNNNNN produces the day of the week as text. It is language dependent.

In our first effort, we will not produce the last business day of a month, merely the last day of the month.

THE SUBPROGRAM

```
* THIS SUBPROGRAM WILL FIND THE LAST (BUSINESS?)
* DAY OF THE MONTH FOR A SPECIFIED DATE
*
DEFINE DATA PARAMETER
1 #DATE (A8)
1 #LAST-BIZ-DAY (A8)
LOCAL
1 #DATE-W (A8)
1 REDEFINE #DATE-W
  2 #YEAR (N4)
  2 #MONTH (N2)
  2 #DAY (N2)
1 #DATE-D (D)
END-DEFINE
*
* FIRST, WE CREATE THE FIRST DAY OF THE
* FOLLOWING MONTH
*
MOVE #DATE TO #DATE-W
MOVE 1 TO #DAY
ADD 1 TO #MONTH
IF #MONTH = 13
    MOVE 1 TO #MONTH
    ADD 1 TO #YEAR
    END-IF
*
* NOW WE CREATE THE DATE FORMAT OF OUR FIRST DAY
*
MOVE EDITED #DATE-W TO #DATE-D (EM=YYYYMMDD)
*
* NOW WE SUBTRACT ONE TO CREATE THE LAST DAY
* OF OUR GIVEN MONTH
*
SUBTRACT 1 FROM #DATE-D
*
MOVE EDITED #DATE-D (EM=YYYYMMDD) TO #LAST-BIZ-DAY
END
```

An interesting note: While discussing a similar piece of code, a student once asked why I MOVE'd our input date to another variable. Note that #DATE-W gets changed quite a bit. You should not destroy a caller's input data unless it is absolutely agreed that this should happen. The same student suggested that I could have put the "answer" in the original #DATE, thus reducing the number of parameters to one. Again, only if it is absolutely agreed that the user will still not need the original date as well as the last business day date.

NEXT STEPS

The program logic is quite simple. We add 1 to the month, and set the day to 1. Yes, you have to check if the month is now 13. If so, you have to set the month to 1 and add 1 to the year.

Take the resultant date (#DATE-W) and convert it to Date format via MOVE EDITED. You now have the day after the date you want (maybe). To be more precise, you have one day after the last day of the given month. So, subtract one from the Date format.

We are not quite done. Here is the output from our original program, which passed a date of February 14, Valentines Day, 2010 (my birthday, in case anyone wants to send a gift next year). Actually, as you will see, February was chosen for a very specific reason.

```
PAGE #   1                       DATE:    08/08/10
PROGRAM: DATEB01                 LIBRARY: DATES

FOR THE GIVEN DATE:  2010-02-14

THE LAST (BUSINESS?) DAY OF THE MONTH IS:  2010-02-28
WHICH IS A   Sunday
```

Note: The last day of February, the 28th, was a Sunday. Recall that our requirement was to produce the last business day of the month. Clearly we are not quite finished.

IDENTIFYING DAY OF THE WEEK WITH A DATE EDIT MASK

If the date is a Saturday, subtract 1 from the Date Format. If a Sunday, subtract two. Thus, you will have converted a Saturday or Sunday date to a Friday date.

How do you know the day of the week? There is a wonderful Date edit mask that addresses this need. It is shown in the code below which tests for Saturday and Sunday. This is inserted after the SUBTRACT statement in the subprogram code shown above.

```
* NOW WE WILL TAKE CARE OF WEEKENDS
*
MOVE EDITED #DATE-D (EM=O) TO #DAY-OF-WEEK
IF #DAY-OF-WEEK = '1'
   SUBTRACT 2 FROM #DATE-D
   END-IF
IF #DAY-OF-WEEK = '7'
   SUBTRACT 1 FROM #DATE-D
   END-IF
*
```

An edit mask of O produces a one character alpha field that contains a number from one to seven. **WARNING!** The assignment of the numbers is controlled by the parameter DTFORM. If you are at all familiar with DTFORM you know that it is mainly employed to control the default display format of Date variables. A DTFORM setting of E stands for Europe, G - Germany, I - International, and U - USA.

DTFORM also controls the designations for an Edit Mask of O. If DTFORM is set to U (USA), then Sunday will be assigned a one and Saturday will be assigned a seven. Any other setting of DTFORM will result in Monday being assigned a one and Sunday being assigned a seven.

As you can see above, I have assumed a DTFORM setting of U, hence Sunday is a one and Saturday is a seven. We did not check for weekdays, since no adjustment is required for them (at least, not yet).

After making the changes shown above, here is our new output:

```
PAGE #   1                       DATE:    08/08/10
PROGRAM: DATEB01                 LIBRARY: DATES

FOR THE GIVEN DATE:  2010-02-14

THE LAST (BUSINESS?) DAY OF THE MONTH IS:  2010-02-26
WHICH IS A   Friday
```

ADDRESSING NON-FIXED HOLIDAY DATES

Now for some fun: Suppose our input date was May 5, 2010. Here is our output using our current subprogram:

```
PAGE #   1                       DATE:    08/08/10
PROGRAM: DATEB01                 LIBRARY: DATES

FOR THE GIVEN DATE:  2010-05-05

THE LAST (BUSINESS?) DAY OF THE MONTH IS:  2010-05-31
WHICH IS A   Monday
```

PROBLEM! In the United States, May 31, 2010 was a business holiday (Memorial Day). Off I went to the Internet, a calendar by my side. At first glance it seemed that Memorial Day, always the last Monday in May, was the only potential conflict and only a conflict if it falls on the 31st of May. This was quite easy to test for using the following code, which I inserted after the weekend tests.

```
* NOW WE TEST FOR MEMORIAL DAY BEING THE 31'ST
*
IF #MONTH = 6 AND #DAY-OF-WEEK = '2'
   SUBTRACT 3 FROM #DATE-D
   END-IF
```

There is something a bit strange in the test above. I am testing for #MONTH being 6; but, Memorial Day is in May. Recall that I increased the month by one when I created the first day of the next month; hence, six, not five in the test. The output from the new subprogram is shown in the following paragraph.

```
PAGE #   1                      DATE:    08/08/10
PROGRAM: DATEB01                LIBRARY: DATES

FOR THE GIVEN DATE:  2010-05-05

THE LAST (BUSINESS?) DAY OF THE MONTH IS:  2010-05-28
WHICH IS A  Friday
```

Note: Even though the last day of May was a business day, we successfully backed ourselves up to Friday the 28th of May.

ONE MORE PROBLEM DATE – THE MOVING TARGET

At my client company, Good Friday is considered a business holiday. This is tougher to test for, as Good Friday is not a "predictable" holiday that falls on the same day each year. There is no simple rule like that for the U.S. Memorial Day, which falls on the last Monday of May. The "rule" for Good Friday is that it falls on the Friday before the Easter holiday—which is also not a fixed date. This can range from March 22nd to April 25th.

Clearly Good Friday cannot create a problem regarding last business day in April. March is the potential problem. Again, a calendar and the Internet prove valuable.

If Good Friday were to fall on March 31, clearly we would want our "answer" to be March 30.

Suppose Good Friday were to fall on March 30? The last day of March would be Saturday March 31. Our weekend code would back the 31st up one day to the thirtieth, which we would then have to back up to the 29th.

One more possibility to worry about: suppose Good Friday were to fall on March 29. The last day of March would be March 31 (which would be Easter Sunday). Our weekend code would back the 31st up two days to the 29th. Our code would have to back this up one further day to the 28th.

On to the Internet…There are six years between the years 2000 and 2050 where Good Friday falls between March 29-31 (2002, 2013, 2018, 2024, 2029, 2040). In each case, our current subprogram will be one day off. So, I wrote the following code and inserted it after the U.S. Memorial Day code:

```
* NOW WE TEST FOR GOOD FRIDAY
*
IF #MONTH = 4 AND #YEAR = #FIX-YEARS (*)  /* YES, =4,NOT 3;
                                          /* SEE ABOVE
DISCUSSION
   SUBTRACT 1 FROM #DATE-D
   END-IF
```

#FIX-YEARS is defined as N4/1:6 and given CONST values as shown in the paragraph above.

Here is the output for a specified date of March 20, 2018.

```
PAGE #   1                      DATE:    08/08/10
PROGRAM: DATEB01                LIBRARY: DATES

FOR THE GIVEN DATE:  2018-03-20

THE LAST BUSINESS DAY OF THE MONTH IS:  2018-03-29
WHICH IS A  Thursday
```

As you can see above, our code works (it's always good when that happens!)

ADAPTING THE CODE FOR OTHER CALENDARS/COUNTRIES

If you have business holidays or other dates that can create a problem (like Memorial Day in the United States, or Good Friday) it is never particularly difficult to write code to test for them. Usually a simple IF with an array of years will suffice as shown in the code above. Actually, you can replace the "compound" IF above with an array of month-year combinations that create a problem.

Don't forget to change the weekend tests if you have DTFORM set to other than U.

A VARIATION ON THE THEME—A SIGNIFICANT DATE THAT RECURS MONTHLY

I have now seen a variation on the theme presented in this article at several shops. The problem is simple. There is a significant date in every month…let's take the fifteenth for example. For a given month (that is a given year-month combination), it is necessary to find the last business day up to and including the fifteenth.

To clarify: suppose the fifteenth is not a holiday, and is a Tuesday. Then the fifteenth would be the required date. However, suppose the fifteenth was a Saturday. Then the fourteenth would be the required date, unless, the fourteenth was a holiday, in which case the required date would be the thirteenth. We will assume there are never two days in a row which are holidays. If we only count federal government holidays in the United States, this is indeed true.

The only two U.S. holidays that have a possible conflict with the fifteenth of a month are President's Day (the third Monday of February) and Martin Luther King Jr.'s Birthday (the third Monday of January). As in the above example for Good Friday, a simple IF statement against an array of years where the fifteenth is a Monday suffices to test for conditions which require a change (in this case to the preceding Friday). It is also easy, as shown below, to test for the fifteenth being a Monday in January or February.

Here is a subprogram that performs such a test for the last business day before the fifteenth of the month.

```
* LAST DAY OF THE MONTH PRIOR TO THE FIFTEENTH
*
DEFINE DATA PARAMETER
1 #DATE (A8)
1 #LAST-BIZ-DAY (A8)
LOCAL
1 #DATE-W (A8)
1 REDEFINE #DATE-W
  2 #YEAR (N4)
  2 #MONTH (N2)
  2 #DAY (N2)
1 #DATE-D (D)
1 #DAY-OF-WEEK (A1)* THIS SUBPROGRAM WILL FIND THE
LAST BUSINESS

END-DEFINE
*
* FIRST, WE CREATE THE FIFTEENTH DAY OF THE
* SPECIFIED MONTH
*
MOVE #DATE TO #DATE-W
MOVE 15 TO #DAY
*
* NOW WE CREATE THE DATE FORMAT OF THE FIFTEENTH
*
MOVE EDITED #DATE-W TO #DATE-D (EM=YYYYMMDD)
*
* NOW WE WILL TAKE CARE OF WEEKENDS
*
MOVE EDITED #DATE-D (EM=O) TO #DAY-OF-WEEK
IF #DAY-OF-WEEK = '1'
    SUBTRACT 2 FROM #DATE-D
    END-IF
IF #DAY-OF-WEEK = '7'
    SUBTRACT 1 FROM #DATE-D
    END-IF
*
* NOW WE TEST FOR PRESIDENTS DAY BEING THE 15'TH
*
IF #MONTH = 2 AND #DAY-OF-WEEK = '2'
    SUBTRACT 3 FROM #DATE-D
    END-IF
*
* NOW WE TEST FOR MARTIN LUTHOR KING DAY
*
IF #MONTH = 1 AND #DAY-OF-WEEK = '2'
    SUBTRACT 3 FROM #DATE-D
    END-IF
*
MOVE EDITED #DATE-D (EM=YYYYMMDD) TO #LAST-BIZ-DAY
END
```

And here is some output from February of this year:

```
PAGE #   1                      DATE:   08/21/10
PROGRAM: DATEB04                LIBRARY: DATES

FOR THE GIVEN DATE:  2010-02-20

THE LAST BUSINESS DAY OF THE MONTH
(PRIOR TO THE 15'TH) IS:  2010-02-12
WHICH IS A  Friday
```

Note: We correctly "backed up" to the preceding Friday.

A COUPLE OF IMPORTANT NOTES IN SUMMARY

· Date format is very useful for finding the first/last days of a given month (or the next month, or the preceding month).

· There are a number of very useful edit masks for dates. Take a look at the Natural documentation for a complete list. In the programs above we made use of EM=O (to get the day of the week for a given date; be careful regarding DTFORM), and NNNNN…to get the text for the day of the week.

Steve Robinson is a consultant and the publisher of "Inside Natural," the developer of "Simply Natural," and a presenter of Natural seminars. You can reach him at steve@slr-assoc.com.

NaturalONE: Maximizing the potential of your Natural applications

By Patrick Gould, Chief IT Architect, Software AG

Natural is more than 30 years old and still going strong. It is my opinion from hands-on experience that Natural is by far the easiest programming language in the world to code with. This means we can still deliver strategic business applications in a fraction of the time it takes in other programming languages.

Unfortunately, there is still a misperception in the user community that Natural business logic assets are trapped inside the legacy Natural environments; that it is not an easy task to open this mass of knowledge as a service or as a Web application to business users.

This article will address that misperception, and focus on NaturalONE and some of the tools available in this amazing product.

NaturalONE was launched in March 2010. It addresses many issues faced by companies today in leveraging existing and future investments.

NATURAL DEVELOPMENT SKILL SHORTAGES

NaturalONE is a modern Natural integrated development environment that lets companies leverage their existing—and future—application developers to easily code in a GUI Natural development environment.

NaturalONE hides where the legacy Natural nucleus is executing and exposes the FUSER to a standards-based GUI development environment in Eclipse. This allows developers who a few years back were only used to green screen development environments, and those just coming out of college, to witness huge developer productivity gains with NaturalONE.

NaturalONE introduces amazing productivity tools such as: context sensitive help, code completion, code templates, GUI code

debugger, WYSIWYG Natural map editor, identification of all syntax errors, hovering, and code folding—just to mention a few. NaturalONE is also very wizard-driven, which makes features such as browsing the data on a Natural DDM, generating a REQUEST DOCUMENT subprogram from an existing WSDL file, and setting up and running unit tests a breeze.

WEB-ENABLE EXISTING NATURAL GREEN SCREEN APPLICATIONS

NaturalONE's best feature is Natural for AJAX, a Software AG product that allows you to build Rich Internet Applications (RIA) without separating Natural business logic from Screen IO.

Another amazing productivity feature of Natural for AJAX is that your existing Natural programmers can do all the work to Web-enable your existing applications. When the pages are saved in the Application Designer (GUI Page Layout editor) a Natural Adapter (actual Natural object) is saved in your Natural Library. The Adapter becomes the plumbing between the executing HTML page in the browser and the Natural code on the Natural Server.

With Natural for AJAX, you start a Natural session in a browser, and can leverage your existing investments in three ways. The best part about these three ways is that they can all be combined in the same Natural session. This allows you to move all your end users to a browser-based application out of the box and then decide

which pieces of the application—say, based on Business User needs—you want to modernize. This is highlighted in steps 2 and 3 below.

THREE WAYS TO LEVERAGE YOUR EXISTING INVESTMENTS WITH NATURAL FOR AJAX

1. Expose your application to the browser out-of-the-box with the product feature of Dynamic HTML Terminal Emulation. The appearance of your pages is controlled by a standard Cascading Stylesheet that can be customized into your companies' Web standards.

2. Convert existing Natural green screen Maps to HTML page layouts using a wizard in NaturalONE. This allows you to add new AJAX based controls to your existing pages. Programs that used the "INPUT USING MAP" can be converted to use the new "PROCESS PAGE" statement manually or with help from the Natural Engineer plugin in NaturalONE.

3. Pages can of course also be designed from scratch per business users' requirements using an array of Rich Internet Application AJAX controls. Then, either new Natural code can be written to handle the pages or existing Natural code can be reengineered for the new pages.
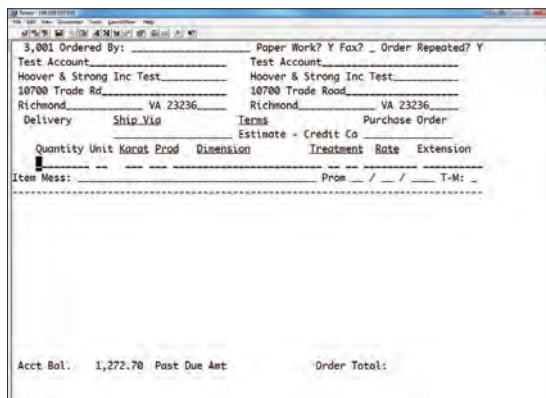
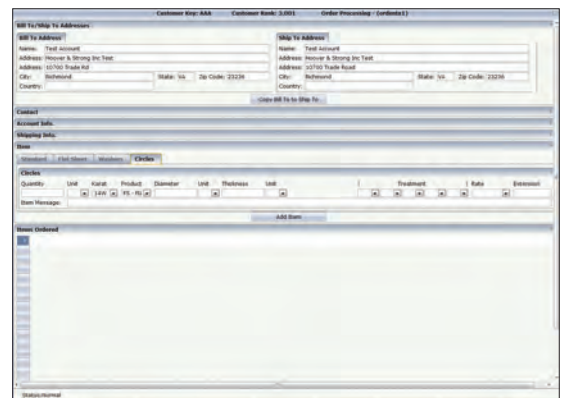**FIGURE 1: A Natural application, many years old, is completely modernized**
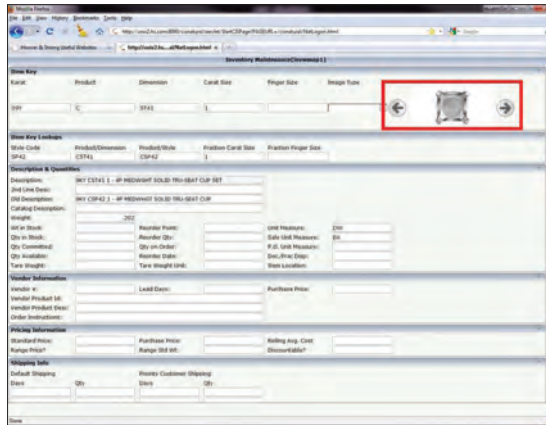
Inventory Maintenance Screen
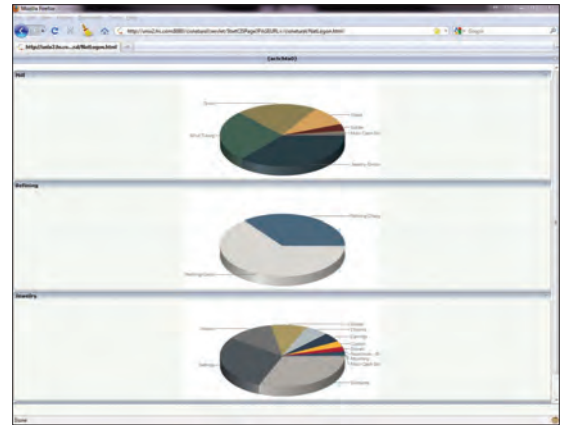
Integration with GOOGLE Charts

Old Order Entry System

New Order Entry System

A MODERNIZED GREEN-SCREEN APPLICATION

Here is an example of what an existing customer has already done with NaturalONE to modernize a green screen application. See Figure 1.

It is very hard for me, someone who has been coding Natural for 25 years, to believe this is an actual Natural application that is many years old—now completely modern with today's Web techniques.

WEB SERVICE-ENABLE EXISTING LEGACY NATURAL APPLICATIONS

NaturalONE provides wizards to "service"-enable your existing Natural subprograms without ever leaving the NaturalONE perspective inside Eclipse. By "service"-enable, I mean generating the .idl, .wsdl, .xmm. and .aar files (webservice related files). The same wizard allows you to deploy the "service" to your webservices stack where your Web developers can now use this service to integrate with the Natural business logic that has been wrapped into this "service". See Figure 2.

It's very easy to accomplish: just right-click on your subprogram and a context menu will pop up with all of the actions you can take on this subprogram including "Generate Web Service...". From within NaturalONE the "service" can also be registered with your UDDI repository for governance and policy requirements.

This clearly negates the misperception that Natural business logic is trapped in some Natural legacy application. The process to open it up to your organization and customers is clearly a very simple task to accomplish, and the business benefits are tremendous.
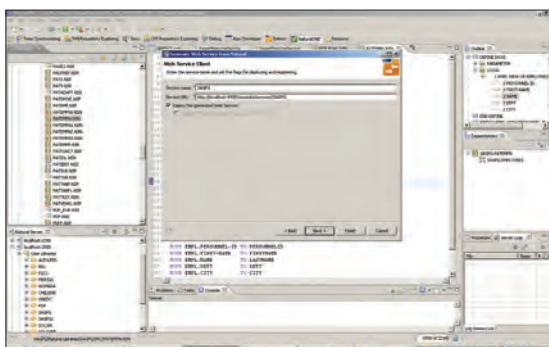

FIGURE 2: NaturalONE wizards allow you to "service-enable" your existing Natural subprograms without ever leaving the NaturalONE perspective inside Eclipse
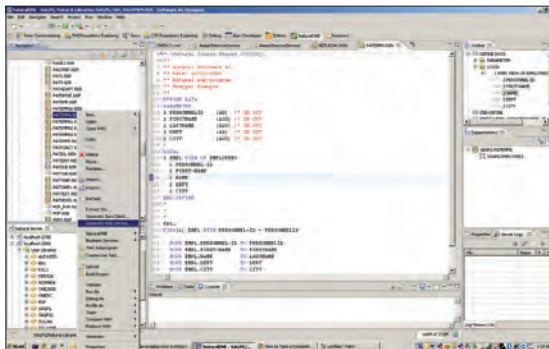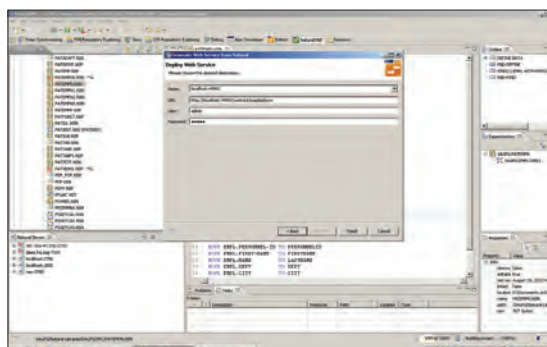

Right click the subprogram
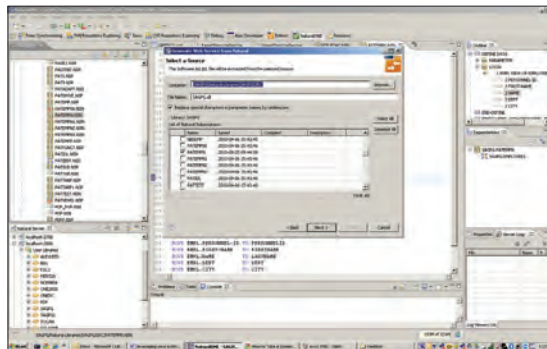
Select the service properties

Name the service and url

Choose the stack and finish the generation

LEVERAGE EXISTING NATURAL CODE WITH CURRENT VERSIONING TOOLS IN ECLIPSE

Eclipse is an open source development environment. As our business users demand more and more browser-based applications, the need for application managers to have the ability to keep all application code related to these applications in a central repository sets a major advantage.

Browser-based applications generally cross programming language and operating platform borders such that Natural code, Java code, and GUI components like HTML/XML/Pictures are all part of the same application.

NaturalONE offers this capability to share all the code that relates to the Natural browser-based application with a code versioning tool like SVN or CVS. Simply right-click on your project and share it with a versioning repository. At this stage, code can be checked out by developers to be later synchronized back into the repository when ready for production use. This provides a centralized mechanism to version Natural code, compare different versions of Natural code and move Natural Code to production environments together with all the other non Natural components that make up the application. Of course, in the tradition of NaturalONE, all actions for versioning and migration of code are wizard-driven. See Figure 3.

FIGURE 3: Share all code that relates to the Natural browser-based application with a code versioning tool like SVN or CVS
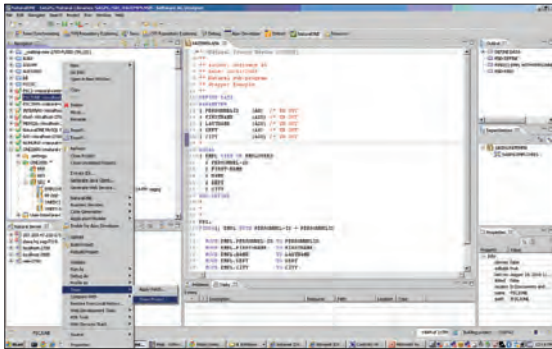
Simply right click on Project to share code
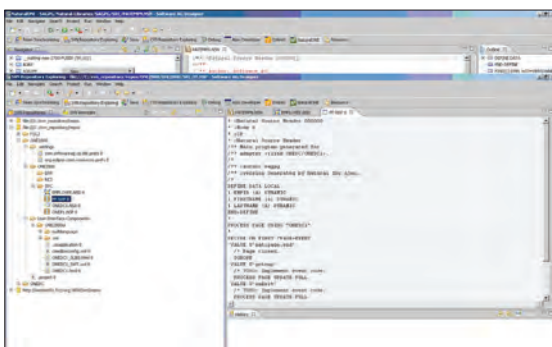
Notice GUI interface and Natural code in repository

HELPING CENTERPOINT ENERGY EFFECTIVELY MANAGE A MAINFRAME MIGRATION PROJECT **ON TIME AND UNDER BUDGET**

By James Gilpin, PMP, Principal Global Consulting Services Consultant, Software AG and Emmett Oliver, Pipeline IT Manager, CenterPoint Energy

CenterPoint Energy, Inc. recently determined the need to migrate all applications and systems off of the mainframe environments to the UNIX environment. The reasoning behind this new corporate direction is that UNIX software costs and maintenance/support costs are significantly less than mainframe environment costs. Also, mainframe technical knowledge is becoming harder to find. CenterPoint Energy Pipeline Group initiated its Pipeline Mainframe Migration to UNIX project to migrate the existing Pipeline Gas Information System and Gathering Gas Information System from the IBM mainframe environment to an IBM AIX UNIX environment. However, before jumping immediately into the migration project, CenterPoint determined the necessity to first evaluate the feasibility of moving the systems from the mainframe to UNIX. A migration assessment project was conducted to determine feasibility and impact to the organization.

Since many of CenterPoint Energy Pipeline Group's core applications are built on Adabas and Natural, and because Software AG's Adabas database and Natural programming language work the same in the UNIX environment as they do in the mainframe environment, Software AG was selected to work on the migration assessment. The assessment started around the end of March, 2008 and ended in mid-May, 2008. Software AG and its Global Consulting Services team worked closely with CenterPoint to assess all important areas. The Global Consulting Services team listened closely to the customer to understand all aspects of the applications and systems for an in-depth evaluation. The assessment and

ROI were presented to CenterPoint during the last week of May, 2008. Software AG's assessment showed CenterPoint could experience a significant savings by migrating the Pipeline Gas Information System and Gathering Gas Information System to the UNIX environment. Software AG forecasted the return on investment period to be three years. After the initial investment is recouped, the customer expects an annual savings of between 40 and 45%. The initial investment costs include the hardware, software, and migration effort.

The migration project was estimated to take around 12 months and was completed on target. Due to its close working relationship with CenterPoint, Software AG was selected to lead the project. Two Software AG Global Consulting Services consultants worked on-site with CenterPoint. A further six Software AG employees worked on the project remotely via CenterPoint Energy's VPN. They were responsible for the technical setting up and converting of the production databases, programming code, job control language (JCL), reports and unit testing.

CENTERPOINT ENERGY, INC., headquartered in Houston, Texas, is a domestic energy delivery company that includes electric transmission and distribution, natural gas distribution, competitive natural gas sales and services, interstate pipelines, and field services operations. The company serves more than five million metered customers in the U.S., primarily in Arkansas, Louisiana, Minnesota, Mississippi, Oklahoma, and Texas. With about 8,600 employees, CenterPoint Energy and its predecessor companies have been in business for more than 130 years.

Software AG is also responsible for the data migration including the mainframe permanent flat files. Pipeline IT is responsible for the purchasing, installation, and coordination of the new IBM UNIX servers and for the third party software. ESPBatch, provided by Cronus (www.cronus.co.za), was selected as the tool to dynamically generate the UNIX scripts that replace the JCL used by the mainframe batch environment. Cronus also supplied Xitext, a report spooler; ESPAuto (batch scheduler); and ESPControl (change control for NATURAL source). UVSoftware (www.uvsoftware.ca) provided a series of tools used to convert EBCDIC files to new ASCII format. Pipeline IT is responsible for creating test data, test scripts, test plans, application debugging, system testing, and setting up the test and development environments. The Pipeline Group business users will be responsible for Client Acceptance Testing. Pipeline IT will work closely with the business users during client testing and with the resolving of any potential issues with Software AG.

Client acceptance testing ended July, 2009 and the project was successfully completed August, 2009. By listening to its customer and developing an in-depth working knowledge of the customer's applications and systems, Software AG's Global Consulting Services team is helping CenterPoint Energy to effectively manage its mainframe migration project on time and under budget.

"Approximately 12 years ago, we did an assessment to determine the feasibility of moving the Pipeline Group's mainframe applications to UNIX. The deliverables from that assessment determined that Software AG Adabas and Natural would perform on UNIX just like they did on the mainframe. However, at that time the UNIX tools for job scheduling and print distribution were not there. The assessment that was conducted in early 2008 determined that the UNIX tools are now there for such a migration effort. Software AG has been a long time partner of the CenterPoint Energy Pipeline Group for approximately 20 years and we contracted with them to lead the mainframe migration effort to UNIX. I have been extremely pleased with Software AG's effort on this migration project. Software AG has also been instrumental in helping us with the learning curve of UNIX. James Gilpin and his staff have been great to work with. They definitely know what they are doing and you can definitely tell that they have done this type of migration before."

Emmett Oliver
CenterPoint Energy
Pipeline IT Manager

To find the Software AG
office nearest you, please visit:
www.softwareag.com

FLORIDA STATE COLLEGE AT JACKSONVILLE'S MOBILE TECHNOLOGY STRATEGY: **iPHONES, iPADS AND ADABAS/NATURAL APPLICATIONS**

By Bruce Beaman, Sr. Director, Product Marketing, Software AG

Florida State College at Jacksonville (FSCJ) has a big mission. The college has more than 85,000 students and is the fifth largest degree granter in the United States. It caters to one of the largest geographic U.S. cities with a median age of 35, which makes it the youngest major city in Florida.

With a youthful population to cater to, Florida State College knows that its students and employees are "digital natives," that is they grew up with and embrace multiple information technologies as a key part of their everyday lives including Twitter, Facebook, eBooks, iPhones, iPads and laptop computers. Much of this technology is mobile, and mobile is everything to the digital native. Students are technology savvy and mobile, and expect the college's technology to be on a par with the best of the systems they interact with on a daily basis.

The FSCJ Technology Department's primary goal is to ensure the optimum student experience. This includes delivering content to students and faculty on their computing and mobile devices of choice that they bring with them, including a broad range of smartphones and laptop computers. Dr. Rob Rennie, CIO and VP of technology, says "The key to a successful student experience is our ability to leverage their existing behaviors and platforms to our mutual advantage. Everything must be of the highest quality and must be mobile."
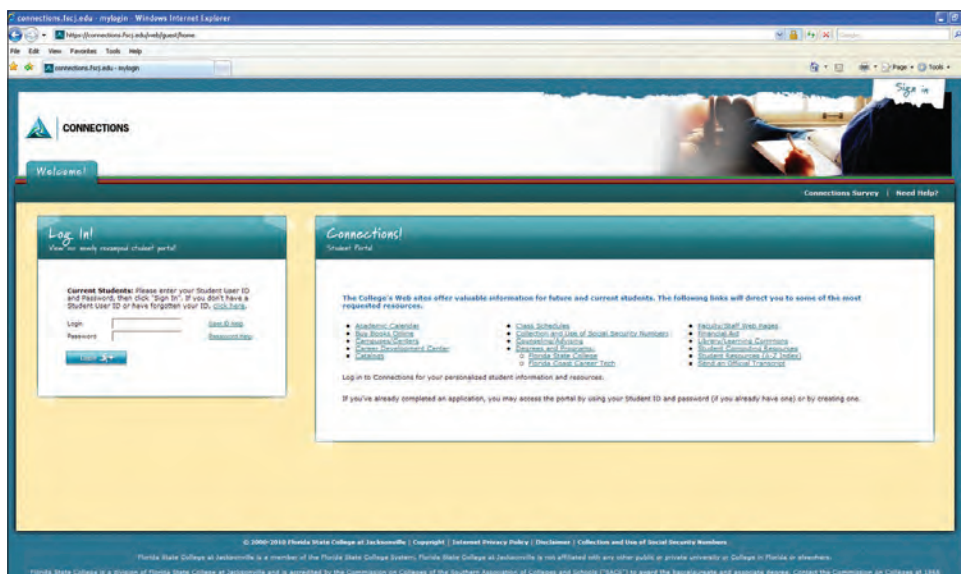
To be successful in their approach, their application delivery model has to be flexible, agile, and must optimize the value of legacy systems that have been built over time. According to Dr. Rennie, "Exceeding the student's expectations is critical. The benchmark is no longer their other educational experience, it is their best experience overall—whether that be Google, Apple, or the store down the street." This is why the college has focused so intently on the interface and mobile platforms from which the content is consumed.

What about the college's long-standing legacy systems, where the majority of that source data resides? Those extremely valuable core systems were created in—and will continue to be—in an Adabas and Natural environment.

So how did that legacy environment become part of the college's mobile strategy? SOA. The college was one of the earliest adopters of a services architecture, going back to the beginnings of SOAP/XML. When the college launched its first mobile strategy in 2005, the decision was made to optimize legacy systems through the use of services rather than replace them.

In 2009, it launched a new student portal called Connections which provides a rich Web 2.0 experience, leverages data housed in its ERP systems built on Adabas and Natural and enables students to manage their entire educational experience online—from enrolling and selecting courses to measuring their success against goals.

Although Connections replaced a solid, award-winning portal known as Artemis, the new portal was developed from the ground up as the realization of a completely new vision. This was made possible by the college's well-established SOA environment.

FIGURE 1: Connections Login Screen

SOA also speeds up development. For example, the college launched a version of Connections optimized for mobile access in just three weeks. Without SOA toolsets, this project would have taken at least four months—or more than 500% longer. Adopting SOA has allowed the college to define and provision an IT infrastructure where different applications can exchange data and participate in various processes, such as enrollment, billing, class registration and progress audits.

But the college hasn't stopped there. In addition to extensive iOS 4 development and deployment, the Adabas and Natural environments at the college are advancing too. NaturalONE, for example, is being seen as a leap forward for their development staff. According to Dr. Rennie "With NaturalONE, you can present your developers with a powerful yet familiar environment. They are already very comfortable with Eclipse."
It is an environment that young programmers grew up with and, like the iPhone, Twitter, Facebook and Google, NaturalONE fits perfectly in the comfort zone of the digital native.

To find the Software AG
office nearest you, please visit:
www.softwareag.com

Berlin…DC…Prague…New York…Atlanta…Sacramento…Austin…
SNAPSHOTS FROM SOME RECENT SOFTWARE AG EVENTS

By Gerd Schneider, VP Marketing and Communities

The first ever joint IDS Scheer and Software AG event, ProcessWorld, took place at the andel's Hotel in Berlin, Germany in June earlier this year. This unique event attracted over 700 participants from over 12 countries, including Germany, France, England, Austria, Russia, North America, South Africa and Turkey. Wolfram Jost, CTO R&D and Product Marketing stressed the importance of Adabas and Natural to Software AG's vision in his keynote address. Leading Adabas and Natural customers participated, with some such as Bartels-Langness from Germany and South Africa-based Mass Discounters presenting. In between the presentations, delegates made visits to the two ETS booths, which focused on Adabas and Natural, with Optimize also available for demonstration.

Natural Product Management Director Karlhienz Kronauer presented and demoed NaturalONE. The Adabas and Natural strategy and roadmap audience was appreciative, with many attendees pleased with the visibility of Adabas and Natural at ProcessWorld. Delegates were also pleased to see many new things happening around Adabas and Natural and learn more about Software AG's ongoing investment in these products and their future direction.

A few weeks later, the attention went stateside as Process World Washington D.C. opened. As in Germany, the D.C. show featured a dedicated Adabas and Natural track with a combination of Software AG and customer speakers. Presentation topics were varied—from Data Archiving for Adabas to Adabas and Natural in a UNIX Environment, for example. One of the highlights was the quality of the customer stories. Mike Conena of Commonwealth of Massachusetts gave a very enlightening presentation on data archiving and Adabas. They anticipate that archiving almost 12 years worth of data on the production database will save significant costs on DASD, CPU and chargeback on the state's largest application. Emmett Oliver of CenterPoint Energy described the one-year migration from Adabas mainframe to Adabas on UNIX and the ROI and benefits they realized.

Norm Thornton of Hoover and Strong spoke about modernizing the company's green-screen applications into rich internet applications using Natural for AJAX. He coined the phrase "Naturally Smart with Natural for AJAX". Demos Economacos of State of Minnesota Dept of Human Services talked about a mainframe modernization project for their ADD child support application, another initiative based on Natural for AJAX. Demos sees mash-ups, the insertion of Google maps and web services being added to the new AJAX application at a later point.

Finally, Dr. Rob Rennie and Dennis Reiman of Florida State College at Jacksonville gave a fascinating lecture on their newly created enhanced mobility experience for their students and faculty based on the Apple platform, including iPhone and iPad applications.

Didn't get a chance to attend ProcessWorld 2010 events in Berlin or Washington? Visit **http://processworld.revent.tv** to view video and listen to audio from some of the presentations held in Washington during June 21-23.

An entirely different event took place in Prague in the Czech Republic during the ProcessWorld D.C. show. The Software AG International User Groups Conference 2010 is an annual meeting of user group members and this year, it drew over a hundred participants from 51 companies across 18 countries. A packed week witnessed 16 customer presentations and more than 30 presentations in total.

IDS Scheer customers attended the general sessions, and the event provided an opportunity to introduce ARIS customers to the International User Groups. The annual conference offers a great opportunity for Software AG product staff and some of the most active users to spend relationship-building quality time over several days in a relaxed setting. Over the five days and two scheduled evening events, Software AG representatives met with many users, and a great number of interesting conversations were had. The range of delegates from such customer locations as far as Australia, Saudi Arabia, Austria, Germany, France, Japan, Turkey, USA, the UK—and of course, the Czech Republic generated a diverse melting pot of ideas and experiences. In particular, several customers and Software AG employees from Brazil experienced their first Software AG International User Groups Conference.

At Software AG, we are also keen to "get out" and meet our customers at their own location. That's why we created the Adabas and Natural Roadshows. These are a series of half-day events being held across the Americas, beginning in the U.S., making their way now to Minneapolis, Pennsylvania and then up to Washington State, before dropping south to Latin American countries. So far, the Roadshows have taken in New York; Austin, Texas; Atlanta, Georgia; and Sacramento, California. Over 100 customers from 39 companies have participated.

The Roadshows are designed to deliver a comprehensive update—from the latest products (NaturalONE, Optimize for Infrastructure Mainframe Edition, and Data Archiving for Adabas) to product vision and a chance to hear how a fellow customer is using Software AG technology. In New York, the audience was taken through our vision and strategy for the next few years, which was very positively received.

Customers also took away the new Vision brochure which outlines the substantial and continued investment being made in the ETS range of products. USB stick pens containing the NaturalONE Community Edition were distributed in conjunction with the presentation by Karlheinz Kronauer, providing a chance to experience the product directly. Software AG's Becky Albin explained the new Optimize and Data Archiving releases whilst Jim Chambers of leading investment bank Nomura focused on Adabas Replicator.

The competition to design a NaturalONE application had a winner in Demos Economacos, Information Technology Specialist at the Dept. of Human Services, State of Minnesota. Demos collected an iPAD for his great application which reads an Adabas file (employees) and allows users to select employees either by double clicking on an employee record or by using a combobox selection. Once an employee is selected, a detail screen for that employee is displayed in a pop-up window. This application is now available for free download from the Natural Community website: **http://communities.softwareag.com/natural**

UPCOMING EVENTS 2010

More Adabas and Natural Roadshows!
Coming soon**...**Canada and Latin America.
For details, agendas, locations and to register, visit www.softwareag.com/Roadshow2010

5-6 Oct: SOA + CLOUD Symposium
Berlin, Germany

6 Oct: ProcessForums 2010
Vienna, Austria

7 Oct: Exclusive Invitation to Software AG's
Customer Update Session
Hong Kong, China

7 Oct: Southeastern User Group Meeting
Charlotte, NC, United States

17-25 Oct: Gartner Symposium/ITxpo NA
Orlando, FL, United States

21 Oct: Minneapolis Adabas and
Natural Roadshow
Minneapolis, MN, United States

25-29 Oct: Sibos 2010
Amsterdam, Netherlands

25-27 Oct: Gartner Symposium/ITxpo Japan
Toyko, Japan

26 Oct: Pennsylvania Adabas
and Natural Roadshow
Malvern, PA, United States

1 -4 Nov: LM Connect 2010
Orlando, FL, United States

3-5 Nov: IMA 2010 Fall Conference
Colorado Springs, CO, United States

4 Nov: ProcessForums 2010
Darmstadt, Germany

8-11 Nov: Gartner Symposium/ITxpo 2010
Cannes, France

9 Nov: Washington Adabas and
Natural Roadshow
Olympia, WA, United States

12 Nov: Toronto CIO Executive Summit 2010
Markham, Ontario, Canada

15-17 Nov: Gartner Application Architecture,
Development and Integration Summit
Los Angeles, CA, United States

16-18 Nov: Gartner Symposium/ITxpo 2010
Sydney, Australia

1 Dec: Chicago CIO Executive Summit 2010
Chicago, IL, United States

For more information, on these and other event, please visit **www.softwareag.com**.

To find the Software AG
office nearest you, please visit:
www.softwareag.com

SOFTWARE AG **USER GROUPS**

An Interview with Bernd Gudat, Director of the Customer Briefing Center, Software AG

Q: Why does Software AG invest in user groups?

Our most important drivers are around the concept of customer-driven innovation. User groups ensure that our development efforts and investments are going in the right direction. Through our feature request process, members of the user groups can submit, discuss, recommend and vote on their product enhancement requirements. This is one way we implement customers' needs in our products.

Another reason why Software AG invests in user groups is that customers and prospects demand such activities. For example, during a proof of concept, a large customer in Germany asked if we had user groups.

And finally, user groups are an excellent platform to establish good and long-term customer relationships.

Q: Software AG user groups have been going strong for over a decade. How?

We try to provide the right platform and keep a high level of satisfaction because we want people to stay in the group,

long-term; keep the groups alive over the years. User groups like to be vendor-neutral and independent. They want the hard facts. They want roadmaps. They want technical discussions. User groups provide these. Our connections are very loyal customers, and we have strong, long-term partnerships with our customers.

Q: How many Software AG user groups are there? Where are they located?

In total there are currently about 30 regional user groups, with hundreds of members worldwide. In the United States, there are 14 different groups. There are groups in Israel, Australia, Japan, Russia, and South America. In Germany, there are four different product-focused groups. ARIS user groups are active in North America, France, Switzerland, Austria, Germany and Nordic countries.

There are also International User Groups— IUGs. These are product-focused on Adabas, Natural and webMethods, with crossover among them. Members are located throughout the world, and come together for an annual conference.

Q: What makes a group 'international' (IUG) vs. 'regional'?

A number of our customers come from very large companies and organizations. For them, it's important to be organized at the international level. If they're a global company, they want to be in touch with another global company. For example, a large global bank would want to be connected to another large global bank. Another aspect is that our customers experience Software AG as an internationally operating company.

By the way, one and the same customer can be a member of the IUG as well as in a regional user group.

Q: Why join a user group when there are so many resources available online, including communities?

You can get useful information online, sure. From our perspective, it is very important not only to have connections but also to have face-to-face contact on a regular basis. This ensures an open atmosphere during the meetings and helps to establish inter-personal relationships and even friendships.

International User Groups Conference in Prague
Software AG International User Group membership represents 362 companies from 45 countries.

At meetings, user group members meet Software AG experts in person and get in direct contact with peers to share ideas and experiences.

Q: What are some of the other benefits?

Once you become a member, you have access to member-only forums, discussion groups, communities that are not open to the general public. During the user group meetings members meet Software AG experts in person and can get in direct contact with their peers to share ideas and experiences. We also offer sneak previews on current research activities.

Q: How does a user group typically form?

Prerequisites for the foundation of a user group is on the one hand a significant number of customers with more or less the same interests and on the other hand the willingness of one or more customers to drive the group.

As an example, last November, a user group in Brazil started directly from customer requests. "Get us in touch with other customers in Brazil!" Sometimes they start because they want to communicate in their native tongue.

Currently, a webMethods user group is being started in the U.K. A customer who attended this year's IUG conference in Prague spoke with other U.K. customers there, and they set up a plan to create a new regional group. Meanwhile, it now has more than 40 members and an initial meeting scheduled for October. Moreover, the foundation of another group, a German group, is planned for the end of September.

Q: Who leads the meetings?

Each user group has an elected president, vice president, and sometimes other elected officers, who lead the meetings and are in charge of the group's activities.

Q: Where are meetings hosted?

Typically meetings are hosted at a customer facility, at the conference facilities of a hotel, or at the Software AG Customer Briefing Center at the headquarters in Germany.

Q: How do I join a user group?

Every Software AG customer can join one or more of our user groups. Membership is free of charge. To become a user group member, you submit an application form online at www.softwareag.com.

Q: Can I start my own user group?

If there is not a regional group near you, you can contact us to get one started. The groups are run independently by customers, but we offer our help to set it up.

Q: You have been involved with Software AG international user groups a long time. How have they evolved?

At the end of the year the officers of the IUGs come together at Software AG headquarters to review the activities of the current year and to plan upcoming projects for the following year. The reviews during the past years have shown that the IUGs are increasingly successful, number of members and companies are growing, more and more countries are represented in the groups. Also the analysis of the quality (customer feedback) proves that we are on the right track with our user group activities.

FOR MORE INFORMATION

Software AG user groups: www.softwareag.com/corporate/community/usergroup/default.asp
Online application: www.softwareag.com/corporate/community/usergroup/IUG_reg.asp
Software AG Communities: communities.softwareag.com

BERND GUDAT
Director, Customer Briefing Center
Software AG

"Through the years, I have always had direct contact with customers."

Bernd Gudat came to Software AG nearly 20 years ago. After his start in customer support, he worked in different positions in IT and in Marketing. For the past 10 years, Bernd has headed the corporate demo center. Now, as Director of the Customer Briefing Center, important parts of his job include the Software AG Customer Visit Program, and serving as liaison for the Software AG International User Groups (IUGs).

WHY JOIN?

- International and regional groups
- Members-only forums and communities not open to the general public
- More detailed information from Software AG
- Networking platforms—for customers and Software AG
- Share ideas and experiences with other customers
- Communicate one-on-one with Software AG experts
- Sneak previews on research activities
- Vote for change enhancements— a key element of Software AG's customer-driven innovation!

To find the Software AG office nearest you, please visit:
www.softwareag.com