

CONNECTIONS

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FALL ISSUE

Come Join Software AG at "Windows on Tomorrow"

The 20th International Software AG Users' Conference, October 22-26, 1989, in Anaheim, California, promises to be our biggest and best ever!

You'll see the people and products that have made Software AG's Users' Conferences the most popular in the world! You'll have front-row seats as Software AG again demonstrates the technologies and services that have made us the world's leading software manufacturer for the last 20 years.

Our 20th International Users' Conference in Anaheim coincides with the 20th Anniversary of Software AG, formed in Darmstadt, West

Germany, in 1969. Software AG's 20th Anniversary also coincides with the 20th anniversary of the independent software industry, initiated when IBM first "unbundled" software offerings from its hardware product twenty years ago.

A Learning Experience: 4 Days of Presentations, Demonstrations, and Classes

We'll be opening the "Windows on Tomorrow" at a wide variety of sessions, workshops, presentations and classes during the 20th International Users' Conference! As attendees from past conferences know, these four days in October

provide a wealth of technical information about Software AG products and directions.

You can attend daily general sessions; see user presentations on unique applications and solutions to problems that your organization might also face; hear Software AG product managers describe the new functionality of products you're using; and interact with the other 2,000 international users!

Demo Room: Creating Business Solutions for Your Organization

We have further expanded and enhanced the popular Demo Room facilities this year to provide an unique set of demos giving you an insight into our latest products and versions on a variety of operating systems.

New this year is the online registration system for the Demo Room. You'll be able to register to see any demo you want through the "Reach Out & CON-NECT" system.

It is Software AG's intention to provide a different focus in this year's product demonstrations. Each demo will address the actual application of Software AG technology to business problems faced by organizations like yours.

"Ask Software AG!"

To fulfill the promise of "Windows on Tomorrow", we'll open the windows on your views, opinions, and questions during the Software AG Open Forum. As always, this forum provides an unique opportunity to address your comments directly to Software AG leading executives and developers, and offer observations that we may use in future development of products and services.

PREDICT CASE: An Integrated 4th Generation CASE Solution

Greg Hagen
Product Manager

Business' create system development environments through the purchase of hardware and software, the rental or purchase of facilities, the hiring and training of staff, and the implementation of corporate policies. The major objectives for this effort are to establish an environment where their staff can work productively in the creation of quality systems that:

- Are cost effective
- Perform as expected, when expected, and
- Are easy to modify in response to changes in the business or technical environment.

Unfortunately, most of these objectives are seldom achieved. Often development focuses on only one or two of the full set of objectives

(e.g., minimize development costs and meet the schedule). Current application portfolios would be in much better shape if well known Software Engineering Practices had been followed during their development. However, even the best intentions are often sidetracked by the harsh realities of limited budgets, lack of qualified personnel, and tight schedules that are seemingly cast in concrete.

There seem to be two extremes in our approaches to developing systems. The first might be characterized as following a "Waterfall" Lifecycle model. Such a project works through a set of phases (e.g., Project Definition, Requirements, etc.) attempting to produce and validate a set of deliverables for each phase.

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President's Message



Bill Wagner

As the days start getting shorter, as the students start back to school, and as the Cubs fade into the depths of the NL East, the time comes to start thinking about the upcoming Software AG conference in Anaheim. For all of us, these yearly events are exciting times full of new product announcements, new ideas, new speculations, and renewed friendships. For some, there is an extra element of anticipation: awaiting the results of this year's SAGGROUP elections.

The individuals who have chosen to run for office share two common traits: they each have a vision of how to strengthen the relationship between Software AG and their clients, and they each have made the commitment of volunteering their time and effort to make that vision a reality. Their nomination statements appear in this issue of CONNECTIONS. I urge you to read and reflect on these statements, using the candidates' goals as the main criteria to determine who will receive your votes. All of the candidates are well qualified and capable people, and all of them have made significant contributions to SAGGROUP in the past. This election, however, is not about the past but about the future. Your votes will help determine the shape of that future.

Elections are not the only conference activity with a direct effect on the future of the user community. For all of the SIGs (and many of the BIGs), the conference is the only time of the year when members have the opportunity to meet, plan, exchange ideas, and conduct business. The SIGs and BIGs each have organizational meetings scheduled for Tuesday evening at the conference. In addition, each of the SIGs will host a workshop during one of the conference sessions. A list of both SIGs and BIGs appears at the back of each issue of CONNECTIONS. I urge each of you to use

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NATURAL ISPF: A NEW DIMENSION IN PRODUCTIVITY

Barry Warwick
Product Manager

NATURAL ISPF (Integrated Structured Programming Facility) is an integrated programming and maintenance environment designed to meet the needs of the application developer and system programmer. Using NATURAL PROCESS as the base technology, NATURAL ISPF users have access to a full complement of integrated facilities such as data set maintenance, PDS member editing, operating system information, ADABAS access, and access to Panvalet and Librarian source. NATURAL ISPF also provides the user with a new, standardized editor for NATURAL as well as non-NATURAL object editing.

NATURAL ISPF's extended split-screen capability provides a solution which unites different NATURAL ISPF objects within a single screen image. For example, databases may be viewed online using NATURAL views while the NATURAL program is edited interactively, and the results may be routed to the workpool for testing and debugging.

Any NATURAL ISPF object (e.g. NATURAL programs, PDS member, etc.) may be exported to or imported from a PC when NATURAL CONNECTION is installed. In addition, the NATURAL ISPF interface to Software AG's office automation system, CON-NECT, allows the transfer of files or documents from one environment to another.

Extended ISPF-Functionality for Heterogenous Environments

In order for an organization to achieve increased productivity, a set of tools must be provided that encompass a wide array of integrated functionality while providing an environment that is both comfortable and familiar. This approach should not be based on a particular teleprocessing or data communications facility, but should allow the flexibility to span multiple environments to ensure maximum

system productivity using minimum system resources.

NATURAL ISPF supports this concept by delivering a set of tools that include an ISPF-like editor. With this single editor a uniform syntax is adhered to for editing of programs and other sources, independent of programming language used or type of source being edited. Compliant with existing standards, it can be used to edit PDS members, prepare JCL, browse JOB SYSOUT or object lists such as VTOC's and the like. Additional

comfort is provided by extending the editor functionality to support special object-specific commands such as Stow, Check, Run, Cat, and Struct when editing NATURAL objects.

Full Networking Capabilities

NATURAL ISPF, working in conjunction with NET-WORK, can be utilized to monitor and maintain NATURAL ISPF objects even when these are located on another CPU, physical machine or at a remote

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VMS Customers—See What's in Store for You at Anaheim!

If you attended the Software AG VMS Special Interest Group (SIG) meeting at the University of Houston this past March, you were given a close look at many of the technical and product-internal advances in Software AG's VAX product line.

But this year at our 20th International Users' Conference in Anaheim, California, Software AG's VAX customers will witness much more than technical presentations about Software AG's growing VAX product line—they will benefit from nearly 40 sessions describing the practical application of these products to solve business problems.

Why Come to Anaheim?

Unlike the Users' Conferences of previous years, this year's conference, "Windows on Tomorrow," will focus less on how our products are constructed, and more on how they are applied in organizations like yours, to address problems you face.

We'll be offering more education, workshops, hands-on training, and expanded product demonstrations; there will be more Software AG VMS developers to meet and interact with; and, for the first time,

we'll make available a separate, special break-out room for VAX users—for meeting other VAX customers, leaving and picking up messages, and just relaxing.

What's on the VAX Agenda?

We'll start each morning with a VMS-specific General Session. These General Session presentations will include addresses by renowned experts in the Digital arena; and discussions of "Open ISA for VMS," "CASE Strategy for VAX," and "Workstation and OLTP Strategy," presented by Software AG executives.

Then, in separate, dedicated "VAX Tracks" offered exclusively for our VAX customers, you'll see presentations addressing cutting-edge issues:

- Portable, Commercial OLTP Applications on DEC/VAX
- Workstation Concepts for DEC/VAX Environments
- CASE Tools for VAX Application Implementation
- Office Automation with DEC/VAX

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ISPF

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location. Maintenance activities across all computing nodes of a network from a host processor optimizes the users productivity. Rather than having the requirement of logging on to each system separately, the user merely identifies to NATURAL ISPF which computer nodes is to be accessed.

Operates across multiple Teleprocessing and Operating System Environments

In order to provide a tool to be used to its fullest by application developers, system maintenance groups or end-users, this tool must not be dedicated solely to a single teleprocessing or operating system. NATURAL ISPF runs in any NATURAL environment. That environment may be COM-LETE, CICS, IMS/DC, TSO, CMS or Batch. Therefore, NATURAL ISPF can become the standard user interface in an organization regardless of the operating systems or the teleprocessing monitors being used.

Full Access to Conventional Datasets, Library Management Systems and System Information

NATURAL ISPF provides access to NATURAL and conventional datasets such as sequential or partitioned datasets, and library management systems such as Panvalet and Librarian. The NATURAL objects maintenance facility allows a full range of functions including displaying a list of members from a NATURAL library. Members may be selected from the list by name, type or status for edit, browse, delete, catalog or uncatalog operations or to display information about a particular member.

A full range of NATURAL commands are available, as well as access to the NATURAL Macro facility for using dynamic substitution of variables in NATURAL programs.

The PDS object maintenance allows listing datasets by prefix, volume or members of a dataset; edit, browse, delete, rename and copy capabilities; online dataset compression; job submission and job status checking including notification and access to a job's sysout.

Other dataset maintenance include online dataset allocations and catalog or uncatalog functions. NATURAL ISPF also provides access to Panvalet and Librarian libraries, offering the same functionality as for PDS members.

Integrated Environment for Interactive Application Development and System Maintenance

Application development and system maintenance requires having access to differing environments and resources in order to fulfill tasks such as:

- Development of applications in NATURAL
- Access to existing programs and subprograms written in 3rd generation Languages or Assembler
- Testing of programs
- Development of documentation such as technical or user manuals and installation documentation

As a NATURAL application, NATURAL ISPF offer its users a single, east-to-use environment in order to have

- One uniform editor to edit JCL, documentation, or programs independent of their programming language
- Facilities to test NATURAL programs and applications without leaving NATURAL ISPF
- Maintenance of datasets and catalogs
- Access to job information, including job activities and sysout
- System operation capabilities like monitoring the SYSLOG, displaying the operator console or issuing operator commands

4th Generation Technology Common User Access

With its integration into the 4th Generation Technology, NATURAL ISPF enhances the usage of its objects. Any of these objects, such as NATURAL source, PDS members, and sysout lists can be exported as documents using Software AG's office automation system CON-NECT. Conversely,

CON-NECT documents imported to NATURAL ISPF can be stored in NATURAL or PDS Libraries or as sequential datasets.

If NATURAL CONNECTION is used, files can be transferred between the PC and NATURAL ISPF using the IMPORT and EXPORT direct commands. Existing NATURAL applications can be included in NATURAL ISPF by simply adapting the supplied menus.

The integration of NATURAL PROCESS technology provides NATURAL ISPF with access to operating system and services. The use of NET-WORK allows NATURAL ISPF to access objects even if they are located on different physical machines.

Enhanced Split-Screen Management System

NATURAL ISPF provides enhanced multi-session and split-screen capabilities to work with a large number of objects in parallel active sessions. These objects can be copied across the boundaries of active sessions. Easy switching between the sessions is controlled by a single command or keystroke.

The capability of suspending any active NATURAL ISPF session and return to them later delivers increased productivity in development.

Enforcing Company-wide User Access Standards

NATURAL ISPF provides a comprehensive online HELP facility that the consists of general HELP texts that explain system functions for self-studying, and pop-up-windows for selection of available commands or objects.

Access to the different functions of NATURAL ISPF is provided by menus or with direct commands. Standard functions may be assigned to PF keys. The choice between menu-driven and direct command input provides flexible and quick access to NATURAL ISPF's functions.

See You in Anaheim!

NATURAL ISPF is one of the many products that will be demonstrated at the 20th International Users' Conference. Also, informational presentations will be given on this product. We hope to see you at this demo and presentation.

New Developments for Software AG and WANG

Leslie Easter
Product Manager

Software AG announced the availability of its core products (ADABAS, NATURAL, NATURAL SECURITY, PREDICT, AND SUPER-NATURAL) for WANG at the International Users' Conference last year in Nashville, Tennessee. At that time there were 2 Software AG/WANG customers worldwide and only three beta sites in the United States. This year, we have more than twenty sites throughout the world, with more than a quarter of them in the U.S.—and the number is rapidly growing!

Customers all over are discovering what Software AG has known for some time: development of NATURAL applications on the WANG VS systems is fast, easy, efficient, and cost effective! And, its FUN!! This is the most rapidly expanding use for Software AG's products on the VS—and as more products become available, it will become a full development environment.

For instance, NATURAL CONSTRUCT is currently available, NATURAL Architect Workstation is in test and PREDICT CASE is under conversion to the VS platform. With this product set, in addition to NATURAL and the VS's normally user-friendly environment, development is a snap!

Moving the applications from the WANG to the IBM is currently achieved through either an SNA transfer or a tape transfer. With the addition of NATURAL CONNECTION later this year, however, the applications can be moved from one platform to another through the NATURAL CONNECTION PC, in unattended mode, if desired. Once the application is ported, there is no need to re-stow the programs, maps, etc.—it's all directly compatible. How much easier can it get!

For those applications developed on the WANG VS which need to access data on the mainframe or another VS, NETWORK will provide

the solution, with both WSN (Wang Systems Networking) and SNA (Systems Network Architecture) support. If there is a need to access existing WANG applications from NATURAL on the WANG, don't feel left out—with NATURAL DMS, NATURAL applications on the WANG will be able to access any DMS or XDMS file, so integration is easy.

Speaking of integration—wait until you see how NATURAL on the VS integrates with WANG's WIIS (Wang Integrated Imaging Systems) . . . Oops—out of space—you'll just need to visit the Software AG/WANG booth at the conference to find out about this exciting development . . . See you there!

SUPER NATURAL Serves You

Sara Wanderer
Product Manager

SUPER NATURAL 2.3.1 was released this July (1989), and this release constitutes another step towards full self-service computing. The ability to actively manage your data, which was provided with SUPER NATURAL 2.1.1, has been extended with major steps toward decision support capabilities.

Those of you who are involved in an end user role realize that there are many different types of end users, just as there are many needs. One thing that you all have in common, though, is the need to make decisions based upon the information available to you. In the process of making a decision, you are called upon to:

- a) capture the existing situation
- b) calculate budgets and plans
- c) prepare what/if analyses

- d) justify your suggestions
- e) distribute your suggestions
- f) monitor your results

There are several ways, both manually and automatically, to step through this list. Our objective at Software AG is to present you with an integrated product set that fulfills all of the requirements to help you make your decisions.

SUPER NATURAL 2.3.1 is our platform that provides the support for your daily work. SUPER NATURAL allows you to create reports, prototype programs and your own personal files, without having to write programs. With SUPER NATURAL 2.3.1, the same menu-driven interface that allows you to create reports also allows you to perform sophisticated calculations using our mainframe spreadsheet, NATURAL SPREADSHEET, and to use the statistical power of the

SAS™ System using the NATURAL STATISTICAL LINK. Both NATURAL SPREADSHEET and NATURAL STATISTICAL LINK will be released this fall.

What about other applications you may use? The ability to create SUPER NATURAL applications allows you to invoke any NATURAL system directly. A built-in interface to CON-NECT, for example, allows you to distribute your SUPER NATURAL results electronically. You can, in turn, use SUPER NATURAL to help you create CON-NECT documents! This same concept will work for your own in-house NATURAL systems.

You can see the interaction of all these components at the demo room at Anaheim, as well as some prototypes for future direction of the Executive Information Products. We hope to see you there!

YES, Please send me additional information on:

- PREDICT CASE
- NATURAL ISPF
- Geographic Information Systems
- Software AG and Wang
- CON-NECT
- FASTRACK

- SUPER NATURAL
- NATURAL ELITE-Computer Based Training
- Please Include me on the Customer Training Mailing List
- Other _____

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TITLE _____

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of CON-NECT, a DCA form document can be dynamically converted for use with the text editor within CON-NECT or a local word processor. In addition, CON-NECT users can send documents to DISOSS using the DISOSS Link.

CON-NECT SNADS Link (Under Development):

The CON-NECT SNADS Link establishes a SNADS communication based on the LU 6.2 protocol. CON-NECT appears to the SNADS environment as a self-contained SNADS node. Thus, any system communicating via SNADS may operate with CON-NECT.

Other CON-NECTivity planned or under development include:

- VAXMAIL/ALL-IN-ONE
- WANG Office
- X.400

Improving communication through CON-NECTivity and portability

are key concepts that you should examine for a successful office strategy.

It is not enough to support internal or external technology unless it is integrated in a useful fashion. CON-NECT effectively utilizes technology by offering you the ability to integrate its features/functions into your existing applications. As an ADABAS/NATURAL user, you have with CON-NECT a product which can incorporate all NATURAL programs into commands, menus, pf-keys, and act as a focal point for entry into all application systems. In addition, CON-NECT activities may be performed from outside NATURAL applications. Thus, objects manageable within the CON-NECT system are also accessible to external NATURAL applications.

By offering complete integration with the data processing world,

CON-NECT offers you a means to incorporate technologies which are useful, but take on a new dimension when integrated with daily problem solving applications. CON-NECT will offer you new and innovative ways to offer solutions to your users.

I invite you to see a greatly enhanced and exciting demonstration of CON-NECT at the Users' Conference in Anaheim, California. We will be showing CON-NECT integration with NATURAL, new image processing capabilities, and a preview of the CON-NECT Macintosh interface. In addition, we will be presenting our plans for CON-NECT's development for the 1990's. I'll look forward to seeing you there!

FASTRACK: How to Jump Start Your Projects

Pete Webster
Custom Solutions Group

Are you new to Software AG's family of products and don't know where to start? Have high turnover rates left you with untrained staff? Do you have a project that you can't get started or that needs a burst of energy?

If you answered "yes" to any or all of these questions, Software AG's Custom Solutions Group offers FASTRACK to help head you in the right direction in a hurry.

What is FASTRACK?

FASTRACK is a custom-designed service that includes formal training for you and your staff, suggestions regarding design techniques, proven methodology used in our own application development projects, and our professionals assigned full-time to your site to provide immediate answers to your questions and concerns.

FASTRACK provides a comprehensive work plan to educate and train your programmers and analysts using our product line. The concept is considered "on the job" training with formal education and

the practical application of the presented material. When your project is completed, your staff is trained and ready for departmental duties. One benefit of this service is that your application systems or sub-systems get written and are ready to use for their intended purpose.

Customized to Meet Your Needs

The key to FASTRACK is that it's not a "canned" set of training objects. Our formal classes address the needs of your staff and recognize their current knowledge and experience levels. Since formal training is scheduled at intervals, it is customized according to your needs, timetables, and desired results or objectives. Although the formal classes cover all of the features within Software AG's product line, the amount of time spent on different areas is directed by the attendees. This "participation in direction" has proven to be a strong personal motivator for all attendees and the FASTRACK advisor.

A secondary motivator is the "real life" application development that guides the whole project. An application is designed, written, docu-

mented, and implemented into your environment by your information systems staff.

An important activity within FASTRACK is the interface with the user community. This provides an opportunity for you to communicate within the company without the daily pressures of demands and problems. The objective of this activity is to design a system from your perspective, using the knowledge obtained from the education of FASTRACK.

Putting FASTRACK to Work for Your Company

If FASTRACK interests you, someone from our Custom Solutions Group will analyze your requirements and present a proposal for the work to be done. Although the time for each project varies, we usually plan on at least eight consecutive weeks, using a staff of five to ten data processing personnel. The cost of FASTRACK is set at a fixed price bid. There are no hidden costs, add-ons, or afterthoughts.

To set FASTRACK in motion, contact your Software AG Account Manager today!

PREDICT CASE

continued from page 1

When coupled with the enforced use of Software Engineering practices this approach provides the following benefits:

- A well documented set of User Requirements on which to base the system design.
- A well designed and maintainable system with low maintenance costs.

Some other typical attributes of this approach are not so positive:

- A long delay from recognition of a user need to the satisfaction of that need via an implemented system.
- A mismatch between the implemented system and the "documented" requirements. For most systems, requirements will change over time. The problem with this approach (even with the use of Front End CASE tools) is to keep the "documented" requirements updated so they will match the implemented system.

The second extreme might be called "Iterative Prototyping." A project following this approach spends sufficient time in requirements analysis to ensure it is "in-the-ballpark." Further clarification of user requirements is accomplished through the creation and use of a series of "working models" or prototypes. The last prototype, with some modifications, often become the production system.

The benefits of Iterative Prototyping are:

- It is extremely flexible. It targets business applications where either the users understanding of the requirements is not clear, or the requirements themselves change rapidly.
- Users tend to be more involved with the development effort. They prefer to evaluate "working models" rather than paper models.
- The time delay between identifying a need and satisfying all or

part of that need may be much shorter using the second approach.

Some other attributes of this approach are also not very positive.

- The toolset used for rapid iterative prototyping may not be appropriate for a production system.
- It can degenerate into a "Code then Fix" cycle approach where the toolset simply allows for faster iterations. There is always the question of "When do you stop?"
- Systems tend to evolve instead of being built to a comprehensive design.
- Unless a shop is very disciplined, the only documentation for the system is probably the code.
- The resulting system will normally be more expensive to maintain than an equivalent system developed with the "Waterfall" approach.

What is needed is a system development environment that combines the productivity gains of a 4GL with the quality and productivity gains of front-end CASE Tools. An environment that combines rigorous analysis and documentation of requirements with a facility that can quickly generate a prototype based on those requirements. Software AG provides such an environment with its integrated CASE tool PREDICT CASE.

PREDICT CASE supports development through the complete lifecycle from project definition to replacement of the system. It provides a central Development Data Base that serves as a repository for the logical and conceptual models that are produced during the early phases of a lifecycle. This Development Data Base is closely coupled with PREDICT (The Operational Data Base) which serves as a repository for the physical models created during the Design and Implementation phases of a lifecycle.

PREDICT CASE provides both a PC based graphic interface and an interactive Mainframe interface to support project definition and requirements analysis activities. Its workstation supports Entity Relationship Diagrams, Decomposition

Diagrams, and Information Analysis Diagrams. These diagrams may be used to initially identify objects (e.g., Entities, Business Functions, etc.) to PREDICT CASE, or objects already in the repository may be selected and downloaded to the Workstation. The Workstation's Layout Manager can be used to clean-up diagrams created by the user, or will be automatically invoked to create the appropriate diagram from a set of objects when they are downloaded from PREDICT CASE.

Quality Assurance functions are provided by PREDICT CASE to test the information stored in the Development Data Base. Quality Assurance occurs at three levels.

- Whenever an object is in the process of being identified or maintained interactive Quality Assurance checks all object specific rules (e.g., that the name given to a new Entity is unique).
- Whenever an object is saved Quality Assurance automatically enforces all rules necessary to ensure referential integrity of the Development Data Base (e.g., That entities required by a business function exist in the data model).
- The first and second levels of QA ensure that the content of the development data base is consistent. The third level of QA checks a selected set of objects for adherence to data and process modeling rules.

Once the Development Data Base has been populated with information about a logical data model, a set of entities may be selected for Schema Generation. The PREDICT CASE Schema Generator first performs Quality Assurance on the selected set of entities, their relationships and attributes. Then guided by a set of user defined parameters, it transforms the logical data model into a data base schema. The user may use default parameters for creating either an ADABAS schema or a Conceptual (SQL) schema, or the user can, within limits, modify the parameters. The parameters guide the Schema Generator in everything from whether or not to populate PREDICT with the results of the schema generation, to how to resolve a specific many to many relationship.

On the process side, methodology and tool support is provided for the

identification and specification of System Functions. Business Functions describe the full set of logical user requirements. System Functions describe the operations that will be performed by an automated system in order to support the Business Functions. When a System Function is defined it then becomes a candidate for the Program Composer.

The PREDICT CASE Program Composer provides a facility for the identification and association of reusable blocks of code. It associates various object types (e.g., Maps, Standard Procedures, Custom Components, etc.) with Frames that are specific to a System Function Type. A System Function is first identified as a specific System Function Type. This triggers the association with a Frame that pulls in all associated blocks of code. The only new code that the user must write is application or program specific logic and algorithms.

Software AG provides a range of solutions in its NATURAL ENGINEERING SERIES to address problems in the Application Development Environment. PREDICT CASE is targeted to support the complete development environment:

- At the Information Systems Management Level with Strategic Planning, Information Systems Planning, and a repository to store, utilize, and control Corporate Data and Process Models,
- At the project management level with lifecycle models and project reporting (Document Generation), and,
- At the staff level within a project with front-end CASE tools merged with Schema Generation and the Program Composer all targeting a highly productive 4GL (NATURAL).

Other solutions provided by Software AG include NATURAL Architect Workstation and NATURAL CONSTRUCT. These products provide a staff level solution that addresses the need for immediate productivity gains both for new development and for re-engineering of existing systems.

During the Users' Conference there will be many opportunities to learn more about PREDICT CASE. A series of detailed demonstrations of PREDICT CASE, its Workstation,

the Schema Generator, and the Program Composer will be provided in the demonstration facility. In addition the following presentations on CASE, the NATURAL ENGINEERING SERIES, and PREDICT CASE will be given during the conference. (NOTE: Check the Conference Catalog for complete descriptions of these presentations.)

- *CASE and Quality Improvement* by Vaughan Merlyn (In Executive Track)
- *NATURAL Engineering Series: SAG CASE Strategy for the 90s.*
- *PREDICT CASE: Repository Drive Tool Support for Application Software Development* (A conceptual view of PREDICT CASE)
- *I-CASE: Methodology and Tool Support for the full Lifecycle* (A technical view of PREDICT CASE)
- *Developing Applications Using PREDICT CASE* (User Presentation)
- *Building applications Using ISO-TEC, the Methodology of PREDICT CASE* (Class by SAGNA Education)
- *CASE Application Development* (Application Workshop by SAGNA Custom Solutions)

VMS

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... And in-depth discussions of how to further apply Software AG VAX technology:

- Installing and Maintaining Software AG VMS Software
- Software AG Network Strategy
- Database Backup & Recovery
- Trouble-shooting in the ADABAS and NATURAL Environment
- Performance & Tuning; Capacity Planning
- Maintaining Integrity in Multi-node Networks

And you'll see keynote presentations—again, exclusively for our VAX customers—by Software AG executives, Digital representatives,

expert industry analysts, and Software AG's Digital product developers. Additionally, we'll be presenting new information—and hands-on demonstrations—of important, new technologies of interest to all Digital users:

- NATURAL Rdb
- NATURAL RMS
- ADABAS 2
- ADABAS/DECIntact
- NATURAL 2

See You in Anaheim!

In short, we're offering a program for our VAX customers like never before. Your attendance at Anaheim will bring you up to date on all of our latest advances and future plans, and provides a unique opportunity to share questions and answers with hundreds of other users.

And, needless to say, you'll be again enjoying one of the finest Users' Conferences in the world—complete with our typically outstanding social events, and the unparalleled regional attractions offered by the Anaheim area.

So make your plans to attend "Windows on Tomorrow" . . . see your Users' Conference registration kit for more information. And we'll plan on seeing you there!

STOP!

If you haven't registered for Software AG's 20th International Users' Conference Call Now!
1-800-843-9534

Graphic Information Systems: What Are They? Why Are They Important?

Bill Gordon

Geographic Information Systems

Recently, Software AG announced its plans for development of two new products that are designed to support applications in an area called Geographic Information Systems, or GIS. The new products, ADABAS Geographic and NATURAL Geographic Workstation, are used in conjunction with a digital map data base of the street network, for any given area, and provide end users with the ability to manipulate and view data from a geographic perspective.

Why are these products and applications considered important? What value and benefit do GIS applications provide to the end user?

Some History

Geography and the use of geographic data have been with us in many parts of our business operations for a very long time. Paper map systems reflect this phenomenon and have been manually created and maintained to support a wide range of industry applications for many years.

As computer technologies have evolved, they have been applied to geographic data processing by cartographers and engineers who wanted to "automate" many of the very labor-intensive steps that go into creating and maintaining numerous map products and mapping applications. Many improvements and advances in computerization of these activities have been developed over the last 20 years. In fact, the evolution of these technical products, and increased recognition of the value of geographically related data, have stimulated such significant interest in commercial industries and government that entirely new segments of business applications and categories of data processing products have surfaced in the last ten years.

In the original efforts to automate geographic data processing, the emphasis was very much on managing the geography itself. Applications for land use planning and

environmental research were the targets of the early technology because that was the essence of what the paper map really was for the end user—an image of the surface of the earth.

As technology was applied to the problem of managing geographic data, it became apparent that there was an equally important characteristic in the map systems of the end user that needed to be addressed. The end product, the map itself, typically reflected many important elements of business information. In fact, the map was the only mechanism for showing the physical distribution of critical business data (see Figure 1), such as where customers are, where critical business data is, where facilities are, and where service calls occur most frequently.

GIS Enters the Picture

It was becoming apparent that geography, or at least geographic parameters, played a critical role in the actual organization of the business enterprise and its operations. How would a business organization function if it could not geographically segment its market, define its distribution channels, regionalize its sales, or describe the boundaries of its service areas? Further, how effective could one be in organizing business operations without the ability to identify what the basic distribution of business data was in relation to the other components of the organization (see Figure 2).

Imagine a sales manager defining a target market without understanding the location and characteristics of the consumer. How would the distribution manager organize the placement of product outlets or distribution centers without knowing the patterns of buying activity or density of product sales? And, finally, how would the municipal government realign boundaries for reapportionment without understanding the geographic distribution of data such as property values, demographics, and other socioeconomic information? Managing the geographically distrib-

uted information of the business enterprise was clearly an important capability.

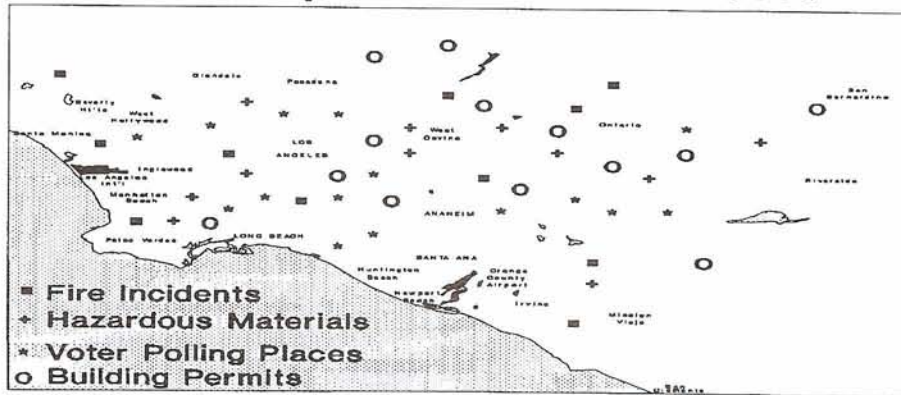
Developments in automated mapping and geographic data management projects soon pointed out the importance of effectively managing and integrating data that was related to geography, or "geographically distributed." Because geography or physical location provided a common denominator for the association of business data, it could be used as the basis for a powerful new information system architecture. Many new applications could be constructed that would merge and analyze business data from the common view of geography—a geographic information system.

GIS Technology

Many types of products and applications have come into the marketplace over the last 10 to 15 years that have tried to satisfy the geographic data processing requirements of the end user. The majority of them have emphasized the graphics processing capabilities typically associated with automated mapping systems. While these have improved the manufacture and look of the mapping products themselves, they have done little to address the management of the geographically related data that already resides in the end user's data processing systems. Most GIS implementations become "departmental" systems, or standalone workstations, that have no direct access to the wealth of data in the product systems of a corporation. If corporate data is to be used in the GIS, cumbersome and costly conversion procedures must be implemented to extract information and apply it to the GIS application. The typical GIS installation cannot be integrated into the existing data processing environment of the business enterprise. Therefore, the most significant benefits of installing a geographic data base—corporate data integration—are not realized. The GIS departmental systems and graphics workstations become "islands of automation."

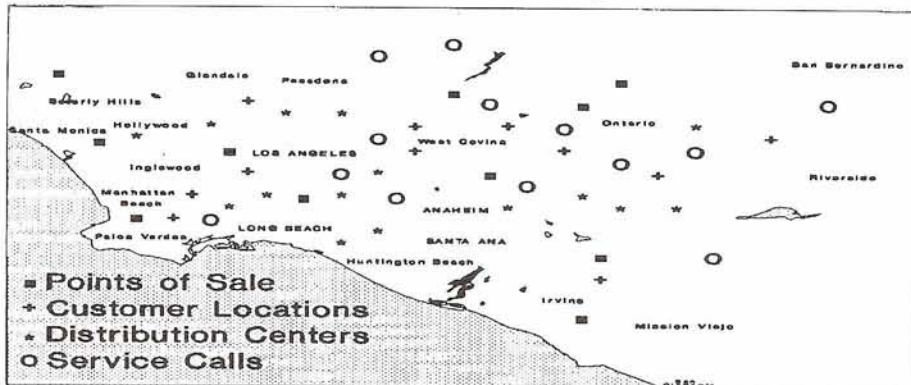
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Municipal Government



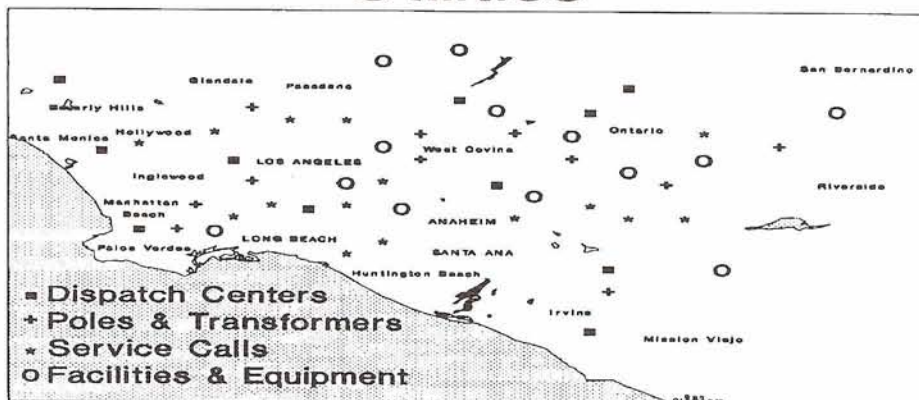
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Utilities



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Figure 1: Geography in the Organization

COMMON COMMERCIAL ACTIVITY

CONSUMER CONTACT
CUSTOMER ORDER
PRODUCT ASSEMBLY
PRODUCT DISPATCH
PHYSICAL DELIVERY
CUSTOMER SERVICES

PROMOTION
SALES
MANUFACTURING
DISTRIBUTION
SERVICE

OPERATIONS
ORGANIZATION
RESEARCH
PLANNING

POINT
LOCATION

NETWORK
LOCATION

AREA
LOCATION

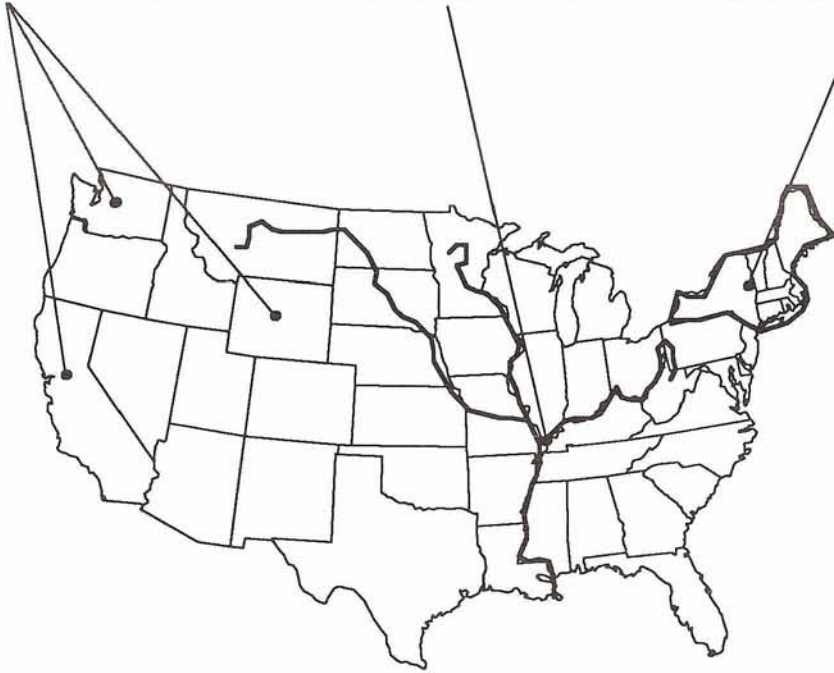


Figure 2: Generic Business Applications that Reference Geography

GEOGRAPHIC DATA MANAGEMENT FOR CORPORATE APPLICATIONS

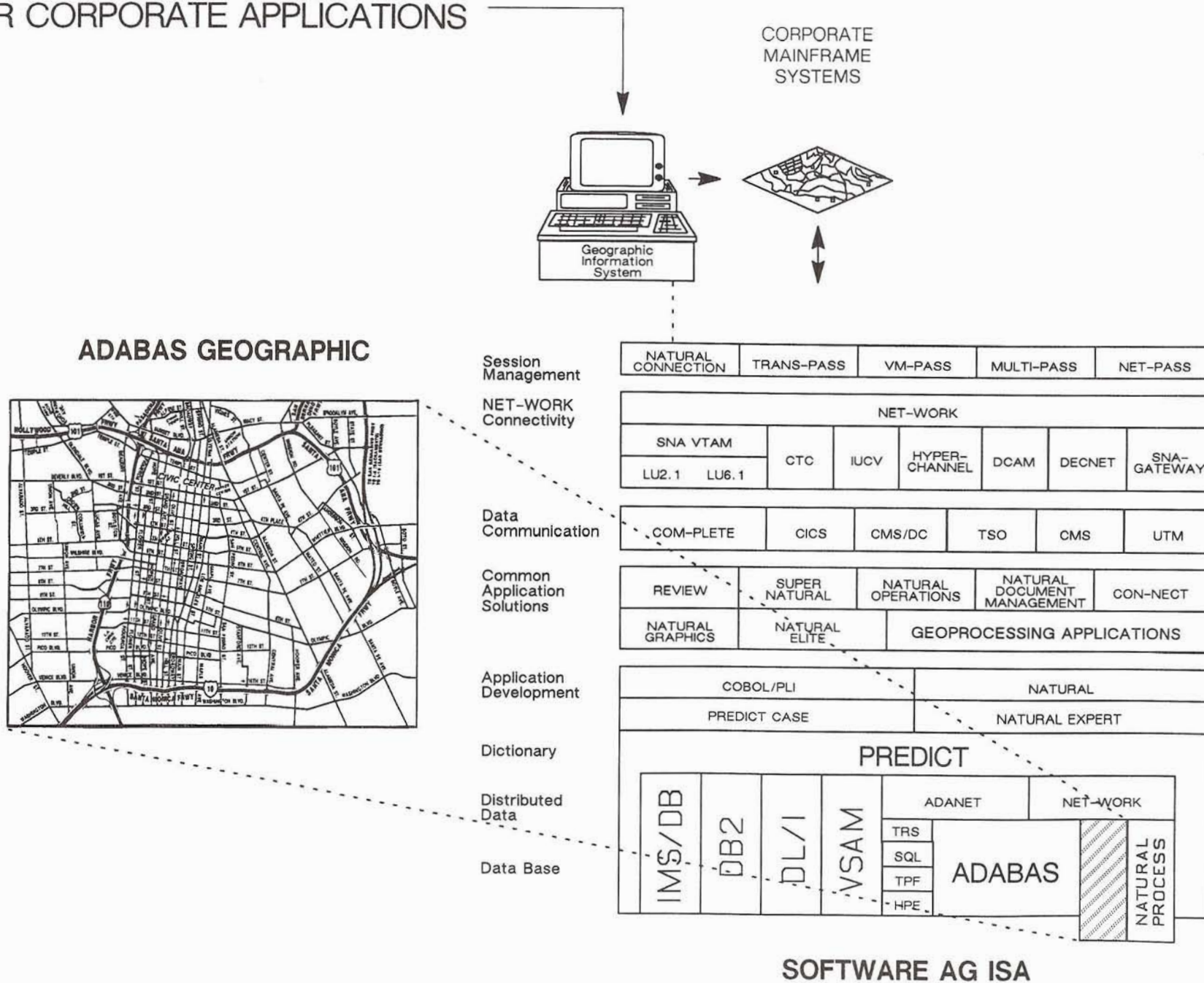


Figure 3: Geographic Data Management for Corporate Applications

The Key to GIS

In recent years, the most significant innovation has been the recognition that "geography" is already a part of business applications. It is not a totally new set of data that must be created and managed as an automated graphics product replacing all paper map systems of the enterprise. In fact, the most important consideration in building a GIS architecture for corporate applications is to introduce *geographic data management* tools that operate against the street address that currently resides in the business system data base. This address-based data is the geography of the commercial business application and the government agency. It is the key common denominator that relates most geographically distributed information for critical business operations.

ADABAS Geographic and NATURAL Geographic Workstation

These components in the Integrated Software Architecture of Software AG—ADABAS Geographic and NATURAL Geographic Workstation—manage the geography of a corporation as an integrated data base. They support the general retrieval and manipulation of geographic elements, and allow application system programs to access geographically distributed information just as they do any other form of data.

These facilities provide the corporation with a tremendously powerful tool for improved data management in a variety of application areas. The corporate end user can now manage information that is geographically distributed (see Figure 3). In fact, the all-important characteristics of the distribution itself can be analyzed and correlated with other factors in business operations. Most significantly, the geographic common denominator concept implemented in this way provides the basis for overall data integration for the enterprise.

Who Benefits?

A wide range of industry operations can be significantly improved

with the introduction of a cost-effective geographic data management system. Government agencies, at both the state and local levels, have extensive amounts of geographically distributed data that they must manage effectively.

For many commercial operations, such as those listed below, effective geographic data management applications are critical to overall profitability in the enterprise:

- Utilities
- Newspapers
- Package and postal delivery services
- Rail and truck transportation
- Real estate
- Travel services
- Health and emergency services
- Marketing research

Next Quarter

In the next issue of Connections, look for examples of geographic data management applications using ADABAS Geographic and NATURAL Geographic Workstation.

Users' Conference

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A Typical Day

General Sessions will take place every morning then you can attend 1 of 10 breakout sessions running concurrently! Since you can't be in 10 places at once we suggest sending more than one representative from your organization. Sessions will include:

- **User Presentations:** Users relate the application of Software AG technologies in various environments, to meet various challenges;
- **Workshops:** Users lead informal sessions on specific Software AG products, as defined by each Special Interest Group (SIG);
- **Software AG Presentations:** led by Software AG executives and product managers, these sessions give you detailed status information about the products you use—including their future directions; and

- **Classes:** Technical experts from Software AG's worldwide offices conduct in-depth, interactive classes to further expand your technical knowledge and skills.

Executive Track Conference: third consecutive year

This year's program, designed exclusively for executives, is full of up-to-date information on the latest trends in the information systems industry.

We'll have industry analysts such as Vaughan Merlyn, Paul Hessinger, and John Logan speaking on the latest industry trends so you know how to position your company for the 1990's. Business Management speakers: Dr. James Wetherbe, Nancy Austin, and Peter Johnson will share their expertise in the areas of information systems, leadership, and strategic positioning.

Also, Software AG Executives will talk about future plans for the 1990's and how Software AG is "The Better Choice." Professor Peter Chen, "father" of the Entity-Relationship approach to database design, and Peter Page', Executive Vice President, Software AG, will discuss "Where CASE Meets DBMS."

Software AG customers from the University of Texas and Central Hudson Gas & Electric will present on how they used Software AG products to produce state-of-the-art results.

The Executive Track Conference will be held on October 22-24, 1989 at the Anaheim Hilton concurrent with the 20th International Users' Conference.

See You in Anaheim!

If you haven't registered for the 20th International Users' Conference call 1-800-843-9534 and ask for the Users' Conference Registrar! You won't want to miss getting a first-hand glimpse of the new directions and technologies that will provide the solutions you'll need in the next 20 years! And at no other time will there be this many Software AG users convened together to share their experiences! So come to Anaheim, help us celebrate Software AG's 20th Anniversary which you have made possible, and take a look at the future of information management through our "Windows on Tomorrow."

PREDICT USER PANEL MEETING

Patti Piccola

BP Exploration

Administrative Product Representative

Editor's Note: In the Summer issue of Connections the 1988 PREDICT User Panel Meeting notes were published. I apologize for any confusion this caused. Below is a summary of the most recent meeting

The 1989 PREDICT User Panel was held in Reston, Virginia on June 22, with sixteen panel members present. Panel members contributed specific questions, concerns and issues to be discussed with Chris Hopker, Software AG Darmstadt, Manager of PREDICT Development. Also in attendance from Software AG were Randy Kastendieck, SAGNA, Customer Support, and Virginia Sullivan, PREDICT QA Analyst.

As many of you know, Software AG has been working for a long time on a project that was originally called Version 3.0, which was based on ADABAS native. Software AG stated that PREDICT Version 3.0 will not be the same product which had been previously announced. Software AG has refocused their direction on the data dictionary after extensive analysis and discussion in Darmstadt. The previous Version 3.0 has been renamed Version 4.0. This change in product structure was brought about by advances in Software AG's Entity Relationship modeling software—ADABAS Entire. PREDICT V4.0 will be based on ADABAS Entire. PREDICT CASE has demonstrated that ADABAS Entire gives the performance and functionality

required for a Computer Aided Software Engineering (CASE) data dictionary environment.

There will still be a Version 3, now called Version 3.1.0. This version was originally PREDICT Version 2.4. Are you lost yet? The renaming of version numbers is a bit confusing; but, I will try to clarify and identify which version is providing what functionality.

First, listed is the current status of PREDICT:

PREDICT Version 2.3.2

Current (as of July 15, 1989)

PREDICT Version 2.3.3

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Japan Region Users' Group 16th General Meeting Held

Sadayuki Takehana

Nikon, Co. Ltd.

On June 7, 1989, the 16th General Meeting of Japan Region Software AG Users' Group was held in Tokyo with 232 attendants from 161 organizations (including 84 organizations attending as attorneys).

The meeting consisted of the report of activities for the previous year, the announcement of this year's activity plans and the awarding for excellent activities. There was much enthusiasm for this year's activity.

Mr. Michael Jakes, Senior Vice President of International Operations Software AG of North America had visited again and reported the current status of Software AG Group around the world.

Report of Activities/Activity Plans for '89

In addition to the regular agenda (report on closing accounts, activities of each study group and its activity plans for '89 as well as approval of the board of Users' Group), there was a report on the new committee which was organized in order to reconsider Users' Group activities.

5 Study Groups (*Database Study Group; Network Study Group; Computer Operation Study Group; Cross Over Study Group*; interchanging opinions of various products; *Management Study Group*, aiming at people at the management level) will work on their themes this year. The former three study groups are further divided into 24 sessions and meet once a month. Each group will report its study results at the next users' symposium to be held in March 1990.

Also, it was reported that "Users' Group Newsletter" played an im-

portant role in activating communication among users.

Awarding Excellent Activities

The "Excellent Activity Award" established last year was given. Individuals and groups that have achieved excellent results in the previous year are elected and awarded.

This year the awards were given to one person in the case study section and to four groups in the group study section.

Management Study Group

After the General Meeting, Management Study Group held a meeting in which 82 people from 70 organizations attended.

Mr. Masayuki Kamei of Toyota Automatic Loom Works, Ltd. made a speech on "Quality Assurance of Software through Systematic Development" at the meeting.

First VMS SIG Conference Smash Success

Michael Livingston
VMS SIG Chairman

"My head is about to explode, I never knew there was so much to learn!" "One day here is worth more than reading all the manuals in the world!" "It's almost unimaginable that I could learn so much and have so much fun doing it! My thanks to all the folks at The University of Houston for making it all possible." "The things I've learned here I've never seen in any manual—it's great having the developers teaching these classes!" "The folks in Houston sure know how to make you welcome and keep you well fed!" These were but a few of the many comments from several of the many attendees of the *First Annual Software AG VMS SIG Users' Conference*.

The VMS conference was held from March 12 through March 15, 1989 and was hosted by the University of Houston in Houston, Texas at the luxurious Stouffer's Hotel. The conference was attended by over 200 people from twelve countries.

The theme of the VAX conference was internals and featured Dr. Herbert Fischer and Peter Holdermann both of Software AG, Darmstadt, West Germany, who over the course of three days presented well over fifteen hours of formal classes on NATURAL, ADABAS, and NETWORK VMS. Among the topics covered were:

- "ADABAS Intertask Communication"
- "NATURAL Internals: Data Structures, Code Generation, Processing Flow, Optimization, and Parameters"
- "ADABAS Internal Structures"
- "ADABAS I/O Routines"
- "NETWORK VMS: Protocol Handler and Network Manager"

In addition to the presentations made by Dr. Fischer and Mr. Holdermann, several user and Software AG presentations were also made. These presentations included:

- "Command Log Interpretation" by Bruce Sions, Department of Transportation, State of Virginia
- "Customizing the User Environment" by Melinda Irwin and Suresh Kumar, University of Houston
- "Writing DCL Command Procedures" by John Fredrickson, National Public Radio
- "NATURAL Architect" by Andy Coutts, Software AG, Canada
- "High Available Systems" by Ron Kaminski, Inland Steel
- "Command Analysis: A Practical Tool" by Tom McNeally, CNCP
- "Product Overview and Future Directions" by Mary Kirkman, Software AG, North America
- "NATURAL Programming Tips and Techniques" by Melinda Irwin, University of Houston

The conference was officially opened by Michael Livingston who welcomed the attendees to Houston. Michael then introduced Tom Berrisford, Director of Administrative Computing, University of Houston. Tom gave an overview of the mission of the University of Houston as well as a slide presentation on the University of Houston campus. Tom then introduced Dr. Richard Van Horn, President, University of Houston. Dr. Van Horn gave a presentation on the advent of computerization and its impact on modern information processing. Tom Berrisford then introduced John Maguire, Chairman of the Board, Software AG of North America.

John enthusiastically welcomed the attendees to the conference and noted how the gathering was similar to the founding of SAGGROUP, the users group. John also noted that the formation of a VAX Special Interest Group and promotion of a conference was long over due and was greatly welcomed by Software AG. John spent several minutes explaining the reasons behind the merger of Software AG, North America with Software AG, Darmstadt. In summary, John believed

that the merger would result in a much stronger Software AG. John then opened the floor to general questions from the audience. In closing, John pledged Software AG's continued support to the VAX SIG.

During the conference considerable discussion was given for a method to easily distribute "shareware" from users and information in general. John Fredrickson and Tom McNeally donated tapes of DBA tools to the SIG. Dan Nolan, of Nolan and Associates, graciously offered use of his VAX system as a messaging and software download facility. The number to dial to take advantage of free user software is (703) 642-1111. The account number and password is "VMSSIG". Dan Nolan and Associates, Software AG, the software authors, nor members of the VMS SIG take any responsibility in the functioning or maintenance of any "shareware" software.

Conference attendees were treated to sumptuous meals at the Stouffer's Hotel with the feature event being a night out at the *Texas Tumbleweed*, a favorite Texas dinner place for T-Bone steak cooked only the way Texans can cook. In addition to the filling dinner, the attendees were delighted by a popular country-western band and dancers dressed in authentic country-western dancewear.

At the close of the conference the attendees unanimously elected the University of Houston to host the second conference once again in Houston. One attendee said "I don't know how Michael and the folks in Houston can possibly out do themselves next year but I'm going to be here again to watch them try!"

So, stay tuned for further information on the next VMS SIG Conference.

Onward To Anaheim!

Michael Livingston
VMS SIG Chairman

The 20th International Software AG Users' Conference is upon us and I hope that every Software AG user will be there, especially the VMS users!

VMS users are like all users; they want to know "What's in it for me?" The Users' Conference represents a rare once a year educational opportunity for all Software AG users to meet under one roof to hear and discuss what has transpired in Software AG and user shops throughout the world since the last conference. At the conference you have the opportunity to not only learn from one another but from Software AG developers who you may never have the occasion to meet otherwise.

This year, Software AG has dedicated great time and energy to insuring that an informative agenda is prepared for VMS users in addition to the usual superb general sessions. So it is with great enthusiasm that I encourage all the VMS users to join me in Anaheim in October.

VMS SIG Agenda

Michael Livingston
VMS SIG Chairman

A general meeting of the VAX VMS Special Interest Group will be held during the 20th International Software AG Users' Conference. Agenda items will include:

- Report on the First VMS Users' Conference in Houston, Texas
- Request for Topics for Second VMS Users' Conference
- Discussion of Change/Enhancement issues
- Other topics as suggested by attendees

We hope to see you there!

Wanted: User Support

Michael Livingston
VMS SIG Chairman

The one thing that is common among users is complaints! It doesn't matter how hard and long we work on a project the final results always fall short of their expectations and needs. No doubt each of us can give pause and recount numerous times we've said to our own users, "Well, if you had just told me that, I wouldn't have done it that way in the first place!" or "If you knew that was a problem, why didn't you tell me?"

In the great scheme of things, we are all users to Software AG. I've heard many accounts in the past two years of how Software AG "... doesn't understand my problem ..." or "If only Software AG would make this change it would make my life so much easier ...". When I've asked if anyone at the site has filled out a Change/Enhancement form, I either get a blank stare or a reply of "What's that?"

Completion of the Change/Enhancement form is an essential procedure for any user to communicate product deficiencies and future product desires to Software AG. The way the process works is as follows: Change/Enhancement forms are available in the back pages of each copy of Software AG's CONNECTIONS. Anyone from a licensed site may fill out a form. Once completed the forms should be returned to the address indicated on the reverse side of the form. Currently, the forms are returned to Kelly Jones of Leaseway National Service Corporation, 3700 Park East Drive, Beachwood, OH 44122. Upon receipt of your form, Kelly categorizes the forms by product and nature of the request. Kelly also attempts to categorize the requests as "product generic" or "product specific", i.e. is the request generic to all NATURAL users or is it specific to VAX users. Once Kelly has categorized the requests, they are sent to Software AG in Reston, Virginia where ultimately it is sent to the product developers.

Unfortunately, very few VMS user sites participate in the process. Various reasons are given for non-action. In particular, I've heard many VMS users either say "What's the use of filling out a change form; nobody in Software AG takes them seriously" or "What's the use of filling it out; the IBM users outnumber us and they always get their way!"

Contrary to the above statements, Change/Enhancement forms are important. First of all, Software AG takes the forms very seriously since the forms are the only means by which Software AG has the opportunity to communicate with every Software AG user world-wide. The Change/Enhancement forms are read carefully by Software AG representatives in Reston, Virginia, and by representatives in Darmstadt, West Germany (including the product developers!).

Second, while it is true that there are more IBM licences held world-wide than VMS licenses this is changing rapidly. In addition, SAG-GROUP representatives do make an effort to determine which requests are specific to the VAX environment and to see that those requests are reported to Software AG as specific concerns.

Most important, however, is not the procedure and process; it is *participation!* VMS users will have less of an impact upon the overall product direction of Software AG unless they actively voice their concerns and desires at every opportunity. The Change/Enhancement form represents a basic input to Software AG and is meaningless unless completed and returned to them.

The Change/Enhancement process is by no means perfect. Unfortunately improvements to products or to the user feedback structure cannot be implemented until every VMS user sends in his or her form and takes the responsibility for being involved!

