

# S O F T W A R E A G C O N N E C T I O N S

## NATURAL: HOW IT ALL BEGAN

The idea of NATURAL was first conceived in 1973 when I had to implement an ADABAS application using COBOL in an OS/MFT environment. Since I had experience developing compilers on small process-control computers that were interactive in operation, I found the batch-oriented large mainframes extremely inadequate. Punching holes in cards, using the abominable job control language and running batch compiles and links was not the best way to implement business applications. Due to other obligations within Software AG, I was not able to continue work on NATURAL until 1976. NATURAL was presented for the first time at the 3rd Users' Conference. As you can probably imagine, the concept of using a non-standard programming language like NATURAL was received with certain scepticism.

At the time it was first presented, the NATURAL concept already had the same goals as it does today. Those goals were and are:

- field oriented data handling;
- integrated database manipulation statements;
- integrated terminal communication statements;
- interactive mode of operation;
- environment independence; and
- high productivity for application prototype development.

Peter Page  
Executive Vice President  
Software AG Darmstadt



In this first presentation, NATURAL was described as a system for extensive reporting, online querying and prototyping, and not as an application development tool. This was due to the fact that using 'non-standard' programming languages for the development of production applications was not yet accepted.

Again due to other obligations, such as building a support group and marketing COM-LETE in the European market, the implementation of the NATURAL system was once again suspended. The developed efforts began again in the middle of 1978.

By July of 1979, the first installation of NATURAL, Version 1.0, was completed and installed at the CAB (Civil Aeronautics Board). Mr. Dan Nolan (now President, Heuristic Developments) and his group used NATURAL to develop an application that would maintain, analyze and condense the CAB data. Although NATURAL did not have the functionality it has today, the CAB was able to implement the requested application within a few months.

Since its official release in 1979, NATURAL has experienced an enthusiastic acceptance in the market place. This enthusiasm resulted in the sale of over 150 copies of NATURAL by the end of 1980 and more than 1,400 by the end of 1984.

*continued on inside of back cover*

# CUSTOMER SUCCESSSES

## Wickland Oil Fuels Growth with Productive DP Tools From Software AG

### *Problem: Bottlenecks in DP*

Wickland Oil is a blender and reseller of gasoline and diesel fuel operating in California, Nevada, and Oregon. The company also owns a chain of retail convenience stores. These combined operations employ over 700 people, and generated in excess of \$300 million in revenues in 1983-84.

Although business was good in 1982, it was becoming clear that the company was fast outgrowing its existing DP systems. Response time was slowing down, disk space was filling up, and future development tasks were getting pushed further and further into the future. As a result, in September 1982 the company brought in Bob Irvine as its director of MIS, and charged him with the responsibility to implement a new system which would allow Wickland Oil to move forward once again.

### *Solution: A Software-Intensive Approach*

Bob Irvine devised and implemented a three-part solution to Wickland's problems: new IBM 4331 L2 mainframe, IBM's DOS/VSE/SSX operating system, and Software AG's ADABAS, NATURAL, COM-LETE and PREDICT.

"Our choice of Software AG's products was the result of asking ourselves: 'How can we make the best use of our budget to produce

effective systems?' The answer was to spend money on software, rather than on additional staff. Software AG had the tools that we were looking for, so we installed ADABAS as our data base management system, COM-LETE for teleprocessing, and PREDICT for our data dictionary. And then we went to work."



### *A New Sales Reporting System in Four Months*

Irvine's first challenge was to stop the growing delays in producing Wickland's sales reports. So, while the new hardware and software were being installed, Irvine began training his staff in the new Software AG products—and established the design criteria for the daily sales system. On October 1, 1983, programming work began.

Four months later, with an average of three people working on the project, the new system was coded, parallel-tested, and implemented with over 95 major online and batch functions, supported by 417 program modules.

"We replaced about a fifth of all our existing systems in about one person-year of coding effort," says Irvine. "That's prodigious. We also added a myriad of new exception reports, programmed checks, and other features, so that now the monthly 'close' operation isn't a race, and more. We now can do any kind of audit whenever we want instead of having to wait until a month is closed."

### *Productivity Dramatically Improved*

"From a development standpoint, ADABAS, NATURAL, and the other Software AG products have given my group a tremendous boost in productivity," states Irvine. NATURAL's interactive development environment is very exciting. You write a module, test it, add to it—the feedback is immediate, and the productivity goes up tremendously. We've even been able to involve our users in the development process—a real first, asking them what they wanted, and giving it to them."

The ability to do **ad hoc** querying of the data base has been especially valuable, adds Irvine. "Management asked us for some additional reports with a focus we hadn't previously thought of. They asked for the reports in the morning. I think they were expecting results in a few weeks. We delivered that same afternoon."

"From a development standpoint, ADABAS, NATURAL and the other Software AG products have given my group a tremendous boost in productivity," states Irvine.

"Looking back after the first year, I'm quite sure we made the right choices to help us break the bottleneck in DP, and I'd make exactly, the same selections again."

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## PRESIDENT'S MESSAGE

*Richard Wolverton  
Commercial Union Insurance*

The annual International Software AG Users' Conference at Nashville is history. The conference is always a hectic time. The opportunity to talk to so many people involved in all aspects of data processing is both overwhelming and invigorating. Those who spent a few moments answering my questions, I wish to thank for their time. Those who spent more time listening to me, I wish to thank for their indulgence. The rest of you I look forward to talking with in the future.

I congratulate new officers of SAGGROUP: Robert "Buck" Shaw, Vice President; A. C. Roda, ADABAS Product Representative; and Ron Hoover, COM-LETE Product Representative. I look forward to working with them on the Executive Committee during the coming year. In addition, Jim Kline has accepted the new position as PREDICT Product Representative. I am confident Jim will use his enthusiasm to forge a strong and active role as the PREDICT Product Representative. These gentlemen are your representatives, get to know them.

The Executive Committee will be meeting in October. Any suggestions or comments about the structure of the annual Users' Conference or other activities should be addressed to Buck Shaw for inclusion on the agenda of that meeting. He may be contacted at the address and phone number located in the Executive Committee Section of this newsletter. Additionally, I remind everyone that now is the time to commence preparing presentations for the next conference in San Diego. □

## CHANGE/ ENHANCEMENT VOTING RESULTS

*Martin Henderson  
Marathon Oil Company*

The International Users' Conference in Nashville brought about many changes to the Change/Enhancement process. The SAGGROUP Executive Committee decided to make some improvements to the Change/Enhancement form. The categories have been reviewed for each product (ADABAS, COM-LETE, NATURAL) and PREDICT was broken out as a separate product. Instructions for filling out the form have been added to the back.

One of the biggest problems with the Change/Enhancement system has been the timeliness. Since it took seven months to process the Change/Enhancements, many were over a year old before they were seen by Software AG. The main factor that causes this process to be so slow is the voting. The Executive Committee decided to change to voting to a post-conference vote. The User community will then be voting on the Change/Enhancements after they have seen Software AG's responses. This gives the user community the ability to vote on the exceptions rather than voting on all Change/Enhancements. For 1985, 65% of the Change/Enhancements were either Available, Accepted or Announced by Software AG. The user community did not need to vote on those Change/Enhancements.

Since the vote before the conference has been eliminated, there is no need to wait until the conference before receiving Software AG's responses. We are, therefore, attempting this year to give the user community Software AG's responses on a quarterly basis. Sometime this summer you should receive a list of Change/Enhancements which represent all the ones submitted since September 30, 1984. This should provide the user community with a much more timely response to their Change/Enhancement requests.

Since the Change/Enhancements will be processed quarterly, you should mail any Change/Enhancements to me at any time. It will be processed in the current calendar quarter or the following quarter.

The sessions at the conference for the Change/Enhancements went very well. The ADABAS session was almost completely devoted to Version 5 discussions. The Version 5 planning session was held the previous day and there was just not enough time to cover everything.

The COM-LETE session only lasted half an hour. Much of the discussion centered around the features of Version 4.4 and Version 5. The last hour was devoted to performance and tuning and it was directed by John Yee, COM-LETE Performance and Tuning SIG Chairman.

The NATURAL session had a lot of activity which centered mainly around Version 2. There were many questions on the Change/Enhancements. Since many of the people at the session had also attended the ADABAS session, some questions were related to features that will become available in Version 5 of ADABAS and whether NATURAL will take advantage of them. □



*Stuart J. Miller, President and CEO, Software AG of North America during the opening general session.*

## **GREAT USERS' CONFERENCE!**

*Larry Jayne  
Software AG*

The 14th International Software AG Users' Conference was held May 19-23, 1985 at Opryland Hotel in Nashville, Tennessee. Everyone had a great time as reflected by the verbal comments and the evaluation forms received from the conference attendees. The users attended product presentations and demonstrations, intensive classes and tutorials on product application and usage, workshops hosted by Special Interest Group chairpersons, and numerous user presentations.

Highlights of the conference included Edwin Newman, NBC correspondent, who's talk, titled "Preserving A Civil Tongue", reviewed the use of the English language. "Language," he said, "is a suitable subject for any audience at any time. It is more than suitable, it's urgent because we have no hope of dealing with our problems except by chance unless we understand them. "And we cannot understand them or one another unless we dig ourselves out from under the jargon we as Americans have been burying ourselves, with no small amount of help, I may say, from the computer industry."

Another highlight was Peter Schnell's ADABAS Version 5 Workshop. This presentation drew more written comments than any other presentation. The attendees absolutely loved the opportunity to hear Mr. Schnell and be able to exchange views and ideas with him related to this subject. The comments ran from, "More Peter Schnell presentations" to "Put him on the stand & let him talk. I will stay until he quits." Mr. Schnell started his presentation with the comment that he had some good news and some bad news. The good news was that ADABAS Version

5 would be out this year to which the audience burst into a loud and long applause. The bad news was that it would be very late this year, to which the audience responded with mild laughter. The intent of the workshop was for Mr. Schnell to obtain user input relative to Version 5 and to share with the attendees the features and functions incorporated in this next version. It was clearly a success.

The conference attendees were treated to another outstanding presentation, this one by Peter Page'. Peter presented an expose' on the 4th generation systems that surround NATURAL and the importance of a high level of integration of the elements of Software AG's 4th generation systems.

Classes and tutorials were the next most frequently mentioned items in the evaluation comments. The classes were well attended with some of them overflowing with people wanting to learn new techniques and methods. In fact, one class was moved to a larger room to accommodate the crowd.

For the second conference in a row, the product demonstration room was available for users to view current and new products from Software AG. This year the room size was expanded to respond to the large number of attendees and the hours were extended during which the room was open so that everyone would have an opportunity to see product features and functions.

The Executive Committee met all day both Saturday and Sunday prior to the conference and each morning during the conference. They reviewed the activities of the past year and the plans for the coming year. Their next meeting will be held October 2-3, 1985 in Denver, Colorado.

Richard Wolverton from Commercial Union Insurance and current SAGGROUP President, reviewed the accomplishments of the SAGGROUP Executive Committee during the past year and emphasized the efforts of each of the Executive Committee members.

The areas of greatest interest, based on conference evaluations, were presentations by Edwin Newman and Peter Schnell, interaction with other users, interaction with Software AG staff, Software AG future directions, product release announcements, and classes and tutorials.

The evaluations clearly indicated the need for more classes and tutorials and for the existing ones to be repeated even more frequently than was done this year. The companions evaluations showed that they wished us to review the companion program with the idea of expanding it to a full program much like what was done at previous conferences.

We now look forward to San Diego in 1986 and another great time of technical sharing and participation. So, get your thinking caps on and start planning your user papers as this next conference is just "Beyond The Horizon." □



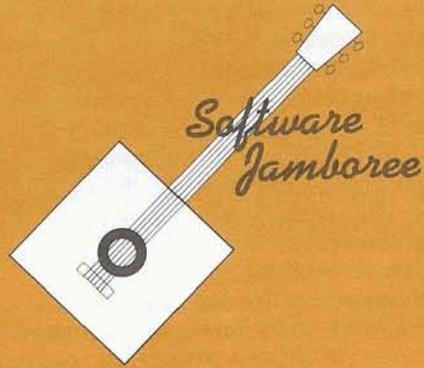
*Dieter Keppler, Software AG Darmstadt, and Natalio Fridman, CONSIST, the Software AG distributor in Brazil.*



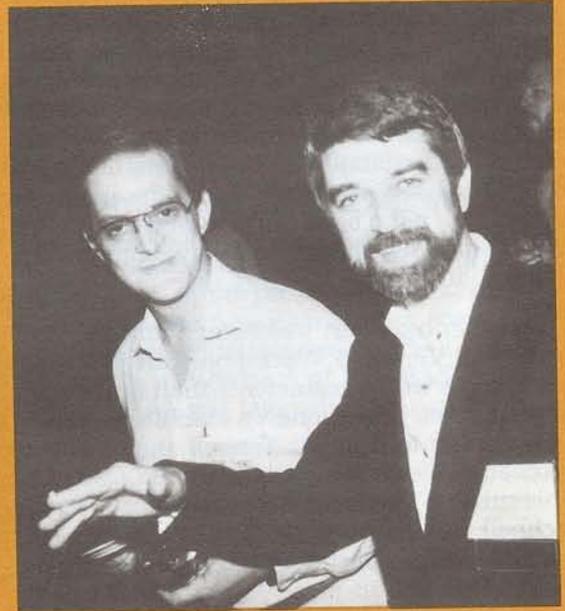
*Peter Page' giving a presentation on Fourth Generation Technology.*



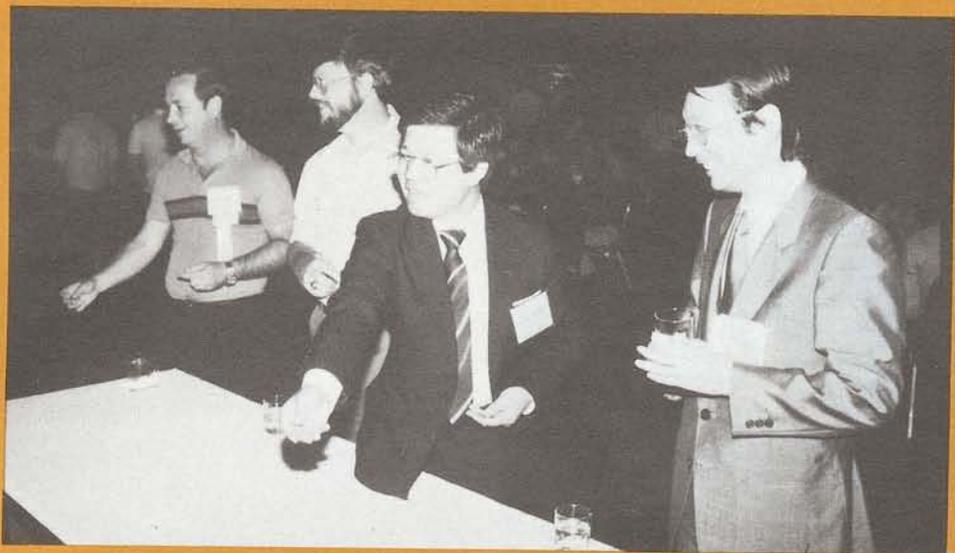
*Keith Newson, Washington State trying his best during one of the Sunday night activities.*



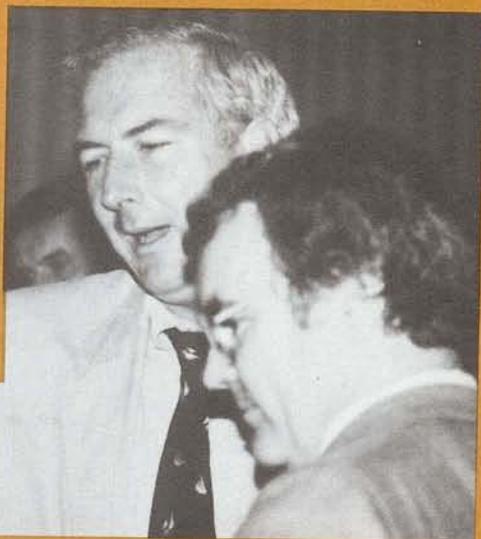
*"When do they bring the dessert?"*



*Two of the attendees from South America.*

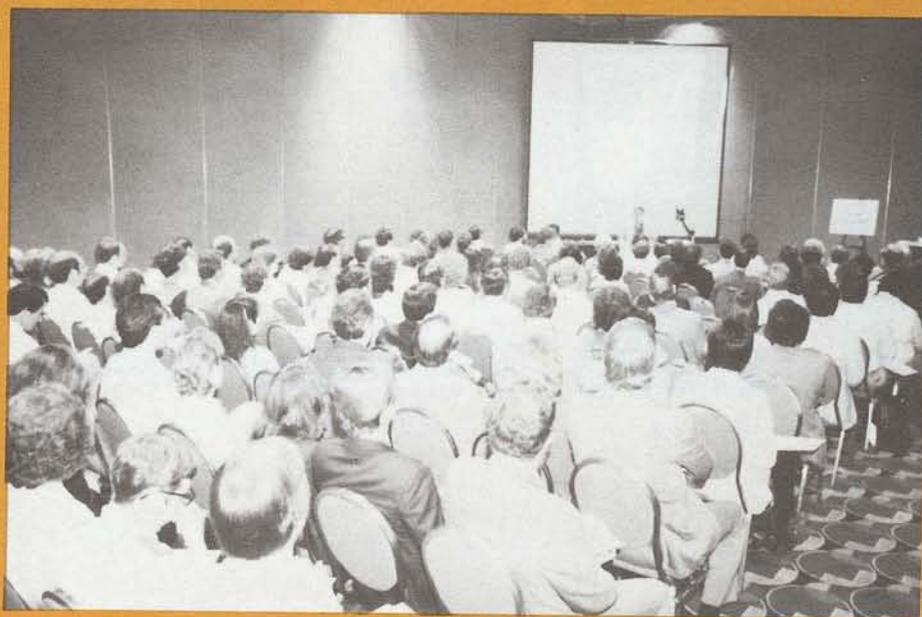


Ralph Jenks, Coastal Corporation, (left) and Mr. Ishii, Software AG Far East, (right) with two other attendees as they enjoyed some of the activities.



Edward J. Forman, Software AG Senior VP, Technology, in discussions with John McAra, Software AG Manager of Product Support

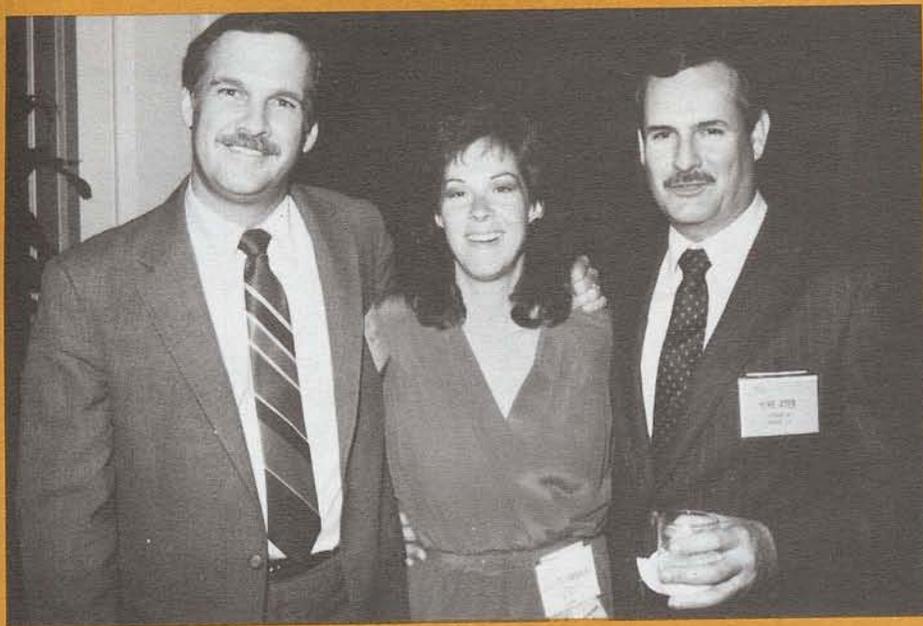
One of the many break-out sessions.



Tom Dimock, Cornell University got an eye full.



(l. to r.) John Maguire, Chairman of the Board, Software AG of North America, Hettie Steyn, Software AG distributor and her husband Schalk, Peter Schnell, President, Software AG Darmstadt and Paul Peterson, Software AG On-Site Support Manager.



*(l. to r.) Mike Ater, Software AG, VP of Customer Service, Colette Farabaugh, Dole Processed Foods, and unknown. "Will the real Mike Ater please smile."*



*Ted Westerman, Software AG Reston "taking aim at who?"*



*"Is he going to bite-off the end of his pipe?"*



*Some of the attendees from the Far East.*

## STATE AND LOCAL GOVERNMENT BIG

Bill Anderson  
State of Washington

The State and Local Government Business/Industry Group (BIG) was formed at the recent Nashville Users' Conference. We invite all interested users to join and participate in activities targetted at sharing applications, data and experiences. We are very much in the formative stage and encourage your opinions on how this BIG can best serve it's members.

Please contact us if your have any questions or are interested in joining:

Chair: Bill Anderson  
State of Washington  
Dept. of Labor and Industries  
Olympia, WA 98504  
(206) 754-1861

Program Coordinator:

Joe Leighty  
State of Colorado  
2002 S. Colorado Blvd.  
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## SAGGROUP EXECUTIVE COMMITTEE UPDATE

Carlo Scagnelli  
SAGGROUP Secretary  
Central Hudson Gas & Electric

The annual meeting of the SAGGROUP Executive Committee was held on May 18-24, 1985 at the Nashville International Software AG Users' Conference. Highlights of the meeting are listed below for your review. Should you require more detail or clarification, please write me at the address listed in the back of this Newsletter. A detailed answer will be provided as quickly and completely as possible.

### User Profile System

The pilot project for the User Profile System has been established within the New York Software AG sales region due to the high concentration and diversity of its user base. Doug Mow, Account Representative from the New York Software AG office will coordinate the effort for Software AG and Carlo Scagnelli, Central Hudson Gas & Electric will provide SAGGROUP support and coordination.

Modifications to the data accumulated, frequency of update, etc. will be made to accommodate user needs. Each United States user will be contacted for information regarding his/her installation, environment, product mix, applications, type of industry, etc. This data will be input to the system and will be available, during this pilot, through Doug to all New York area users.

Software AG is committing time and resources to the pilot in an attempt to make the profile system viable for both the user and Software AG.

We have all been waiting for the profile system for a long time. The pilot will be evaluated in October, 1985 at the next Executive Committee meeting. The responsibility now falls on the user community to provide timely information when requested. The data will be only as good as our efforts.

## Product Release Status & Schedules

### ADABAS Version 5

The original release date had been purposely delayed to permit 'XA' support to be included in the new release. Version 5 will go into beta test in the second half of 1985. Conversion guides were distributed during the conference at the ADABAS Version 5 Workshop given by Peter Schnell. Copies are also available through your account representative.

Basic ADANET capabilities (IBM to IBM) will be include in Version 5.

NATURAL ADVANCED FACILITIES will be available for release in Fall 1985.

### NATURAL Version 2

As with ADABAS V5, the new release of NATURAL will go into beta test during the second half of 1985. Conversion guides for the product should be distributed after the conference.

### PREDICT Version 2

The product will go into beta test in June 1985 and will be available later this year.

### COM-LETE Version 4.4

The product will go into beta test during the second half of 1985. COM-LETE Security, better TTY, full screen 3270 simulation and ASCII support plus on-line monitor features will be included when the product is released simultaneously with the new versions of ADABAS, NATURAL, and PREDICT.

## Product Support

### NATURAL

The omission of reference to CMP-EXIT in NATURAL SM06 was not an indication of lack of support. The feature is fully documented in SM05 and Software AG felt no need to repeat the data. This will be rectified in the future.

Noting that the 'SYS' functions don't work consistently, Software AG requested that these annoyances should be reported as bugs since they are as damaging to customer product satisfaction as operational bugs.



The discontinued support of the use of 2 character ADABAS names in programs was discussed. It was pointed out that previously published Software AG directions indicated that this would happen. The restriction is needed for the use of multi-file DDM's in ADABAS V5 and NATURAL V2. Although previously compiled object code will run, conversions are very difficult. Software AG is considering a global option where, if 2 character names are used, multi-file DDM's will be prohibited and vice versa. In addition, a conversion utility for existing programs is an option under consideration.

### **COM-LETE**

The 1984 task force solved a majority of the outstanding problems.

Software AG currently has 6 people assigned to this function. The Customer Support Group was noted as being very helpful and will be continued. Software AG agreed that more 'SM' levels are needed for COM-LETE and on a more frequent basis. Use of the SAGUTILS process is also under consideration. The Executive Committee is investigating possible creation of COM-LETE Technical Support SIG to help coordinate specific issues.

### **SAGUTILS Release Procedures & Content**

Three Changes will be made which may solve some SAGUTILS problems;

- a) SAGUTILS will be issued on tape, quarterly or semi-annually.
- b) Denver's TSOP system is being rewritten and may have online access when completed.
- c) A periodic and consistent schedule will be developed and followed.

Dial-up capability is at least a year away and TSOP is being developed to support both Denver technical staff and the end-user. Software AG will work with SIG personnel to ensure that the final product is mutually satisfactory.

### **Denver Customer Support Center**

The following procedure will be enforced within the center which should provide better and quicker response to user problems;

- a) A Level 1 person answering a phone call will review the reported problem with the user as it was entered into the log to verify that it was correctly understood and interpreted.
- b) If a Level 2 person is required, the Level 2 person will read and research the problem log before returning the user's call.

Users should note that support center personnel are available for attendance at regional meetings if requested through Art Burkett or your respective Account Representative. They will arrive prior to the meeting and make every effort to visit user sites to get acquainted. Support

personnel are also assisting in installations at various sites to become more familiar with product operations.

### **Product Release/SM Distribution Procedure**

Software AG's goal is to include only fixes to current problems in 'SM' versions with a semi-annual release schedule. New features will be included in new versions released on an annual basis. New releases will be accompanied by updates to the documentation which require modification of existing manuals.

### **Education Developments**

Three ongoing projects have results available currently or in the near future;

- a) ADABAS Concepts & Facilities course is available from both ASI and Deltak.
- b) End User Introduction to NATURAL course will be available shortly.
- c) Computer Based Training (CBT) courses are in development for NATURAL.

Courses are in development in NATURAL Administration, Data Dictionary-Concepts & Facilities, Data Modeling and Prototyping. Several were offered at the Nashville Users' Conference and may be added to the list of available public offerings.

A class on Security and its administration, use and implementation within and across product lines is on the back burner but has not been forgotten.

### **Regional Education Capabilities**

Facilities will be expanded in Denver, Colorado and Hasbrouck Heights, New Jersey complete with terminals by the fall of 1985. A west coast site may be possible if there is sufficient space in the new Software AG Los Angeles offices. For the time being, a shared user site may be the quickest answer for that area. Users interested in data on onsite sharing or available classes, should contact either their Account Representative or Stan Maring (Reston).

### **Documentation**

Software AG is developing self-study training guides for several products as was done for SUPER NATURAL. Documentation is the second item on both Software AG's and the users' list of priorities after product stability. Software AG has established an internal task force to address the documentation issue and a report will be available for the SAGGROUP Executive Committee in October. It was noted that high on the list of requirements were Performance & Tuning Guides for ADABAS, NATURAL and COM-LETE as well as a NATURAL Internals manual.

## **PREDICT Product Representation**

A new position of Product Representative for PREDICT has been established by the Executive Committee. The action followed a report on the meeting held in early 1985 by Software AG product and education managers and representative of the Data Dictionary Special Interest Group (SIG) to provide input to the direction of future development of PREDICT.

It is intended that the group will meet annually with Software AG to discuss future development. Participating users will be drawn from the SIG. The group requested that given the importance of PREDICT in the future Software AG DBMS environment, a separate product representative should be established.

SAGGROUP President Richard Wolverton has appointed Jim Kline, Colorado Interstate Gas Co., to serve as interim PREDICT Product Representative until elections are held in 1986.

## **User Involvement In Product Development**

Software AG expressed appreciation to the efforts of the PREDICT group noting that their input was and will continue to be valuable in determining direction strategy for the product. Based on that experience, Software AG may establish similar groups for other products. Two-way communication on product direction has the potential of solving many problems before release into the market.

## **Technical Support Committee Report**

The 1984 Technical Support Survey covered a broader base than that of 1983. Also, four-year data is available for most comparisons. The survey is now automated thereby providing better analysis capability and year-to-year comparisons.

Overall, more calls are being made to the Denver Customer Support Center than in the past with an average of 240 calls per day. Results on recent SM's indicate them to be better than average in all categories except documentation.

Survey results indicate that response is quicker but that overall problem resolution is taking longer. Users of this product indicate that they need fixes to known problems before they experience the problem (i.e. faster distribution of fixes).

## **Business/Industry Groups (BIG's)**

New to the conference was a special meeting of all users relating to specific industries and businesses. A University & College BIG was formalized in 1984 and several new groups were formed on Tuesday night at the Nashville Users' Conference. BIG's are a form of special interest groups aimed not at product technology but rather at product application. The chairman of each BIG is hereby requested to submit the name of the BIG and the list of its leaders and members to the SAGGROUP Secretary as soon as possible.

The Executive Committee has formed a special committee headed by "Buck" Shaw, SAGGROUP Vice President to study the function, needs and representation requirements of the BIG's and report at the next Executive Committee meeting.

## **International Representative**

Dante Nardelli and Don Fukushima indicated that International Users are receiving SAGGROUP Newsletters, Change/ Enhancements, ballots, etc. up to one year late. Larry Jayne, Users' Group Liaison, reported that Software AG of North America, Inc. bulk ships all material within 5 days of his receiving the materials and that Software AG will investigate and resolve the apparent difficulties in distributing information to the International Users. Until such time as the problem is cleared up, he will mail one copy of whatever is mailed to distributors, directly to each International Representative. In this way, they will know what information is available and can inform other users through regional meetings.

## **Newsletter Articles**

The shortage of user articles was discussed with stress on the need for more articles from the international areas. All users making a presentation at a regional meeting are urged to prepare a summary version for this newsletter and forward it to the appropriate product representative. Each international representative will be contacted requesting articles. This publication should be a forum representing the international community, not only North America.

## **Regional Realignment Project**

To minimize the time and expense incurred for attendance at regional meetings, due to the size of some regions, the location and concentrations of user sites and Software AG sales and support offices are being reviewed. Where practicable, regional boundaries will be revised with new regions possible. The proposed project will be explained in detail by the regional representatives for input from SAGGROUP members.

### **Request For A Separate Western Canada Region**

At the request of western Canadian users and with the support and approval of both Software AG Canada and the Eastern Canada SAGGROUP Region, the Executive Committee approved the formation of a new region. The Western Canada Region will include the provinces of Manitoba, Saskatchewan, Alberta and British Columbia, south to the Canadian/United States border. The users in attendance from Alaska indicated that Alaska will remain within the Northwestern Region.

### **Area Representatives**

At the meeting of all SAGGROUP Regional and Area Representatives on Sunday afternoon, May 19, 1985, at the Nashville Users' Conference, it was decided that each region will independently determine policy on the role of consultants within their regional organization.

### **NATURAL Techniques SIG**

Ted Venema has stepped down as Chairman of this SIG since he now works for Software AG Canada. Ted has done an excellent job during his tenure. Dave Alexander, NATURAL Product Representative, appointed Jim Wisdom of Boston University to fill this vacant chair.

### **Secretary's Request**

To assist the Executive Committee in filling positions that become vacant between elections, each SIG and BIG Chairperson, product representative and committee chairperson is hereby requested to inform the SAGGROUP Secretary of the name, address and telephone number of vice-chairpersons and/or assistants within their group.

### **Future Meetings**

The mid-year meeting of the SAGGROUP Executive Committee is scheduled for October 3-4, 1985 in Denver, Colorado. □

## SOFTWARE AG IN THE NEWS

Following is a list of selected Software AG In The News since June 1, 1984:

DATE	PUBLICATION	TITLE
June'84	Systems User	SAGGROUP Meets In Anaheim
6-29-84	Computer Weekly	Wheat Board To Spend \$3M on DP Upgrade(Pacific)
6-29-84	Computerworld	ADABAS is Given Top References (Australia Issue)
June'84	Software News	DBMS Power Eases Manufacturer's Chores
June'84	Infosystems	Software Helps MD's & Hosp.Improve Patient Care
June'84	Asian Computer Monthly	OA Goal as Neptune Orient Plans Worldwide Data
June'84	Datamation	Micro To Mainframe Link
June'84	Data Communications	NATURAL/CONNECTION
6-29-84	Computerworld	Data Base Pkg.Helps Streamline Govt.Dept.(Canada)
7-26-84	Washington Post	SAG Posts Gains in Quarter, Year
July'84	Infosystems	TP Monitor/Aids Similar to CICS
July'84	Data Management	Software AG NATURAL/CONNECTION
July'84	Infosystems	Mainframe Interfaces/Downloading Files
8-6-84	ISN	SAG Systems' Profits, Revenues Rise in FY '84
Aug '84	Infosystems	Continuing Education?
8-20-84	Computerworld	Cullinet, ADR Dispute Over Who Got to China 1st
9-24-84	Computerworld	Techno-Bandits
9-24-84	Computerworld	4GL, DBMS Ease Insurance Firm's Applic. Dev. Prob.
9-24-84	Infosystems	There are Times When Two Very Dynamic Co. Realize
10-8-84	Computerworld	Software AG's DBMS For VAX Grab Show Spotlight
10-10-84	MIS Week	Software AG Boosts IBM-DEC Portability
10-15-84	Computerworld	Tesseract Line Adds Payroll
10-15-84	ISN	Software AG Extends ADABAS to DEC's VAX
10-15-84	ISN	Tesseract Introduces IBM PC-Mainframe Link
Oct '84	Infosystems	In Search of 4TH Generation Language
Oct '84	Software News	Keeping Tabs In A Dynamic Community
11-1-84	Datamation	Business Solutions To Business Problems From SAG
11-5-84	Forbes	Software Solutions
Nov '84	Systems User	Industry Activities
Nov '84	Software News	ADABAS, NATURAL Move To VAX-11 Supermini
Nov '84	Tele. Products & Technology	DBMS Makes The Network More Accessible, Solves
12-1-84	Datamation	Systems Software Survey/Data Decisions
12-19-84	MIS Week	Firm May Enter Applications Field
Dec '84	Infosystems	Let's Talk DBMS
Dec '84	Infosystems	VSAM To ADABAS
Jan '85	Infosystems	One layer At A Time
1-1-85	Washington Post	SAG Profits Up 45% In 2nd Period
1-28-85	Computerworld	Option Simplifies NATURAL Language For Nontechie
1-30-85	MIS Week	Integrated Pkg. For Mainframes
Jan '85	Systems User	Jacking Up End-User Productivity
2-11-85	Canberra Times	Leader In Software Visits
2-12-85	The Australian	Soviets Stung In Bid For Database
2-15-85	Pacific Weekly	Changing Trends In Software
2-19-85	The Australian	Missionary Zeal Brings Results
Mar '85	Datapro News	Spielberg Has Nothing On The SUPERNATURAL
3-11-85	Computing S.A.	Bosch's DP To Be Reshaped By SPL
3-11-85	Computing S.A.	Garlick's Switch From COBOL To ADABAS
3-18-85	Computerworld	DP Retrofit Keeps Schwinn Wheeling To Recovery
3-25-85	Computerworld	Hospital Finds SUP/NAT Aids Access To Live Data
4-22-85	Computerworld	Software Aids In Machine 'Birth'
4-29-85	Information Week	ADABAS Gets E-MAIL
4-29-85	Computerworld	Software AG Adds E-MAIL, Other Aids
5-6-85	Washington Post	The Top 100 Companies (Washington Business)
5-22-85	The Tennessean	Let's Scrap The Jargon, Edwin Newman Pleads
5-27-85	Computerworld	Die-Hard COBOL Programmers Try NATURAL & Like It
5-27-85	Computerworld	Software AG Announces dBASE III Compatible Link
5-27-85	Inform.Week	Software AG Makes A NATURAL CONNECTION
5-27-85	Inform.Week	Software AG Scours Broader User Base
5-29-85	MIS Week	Software AG Offers ADABAS Link
6-3-85	Computerworld	'Not For Sale' Tool Meets Xerox Needs
6-5-85	MIS Week	'Techies' Cautioned To Watch Language
6-5-85	MIS Week	'ADABAS' Continuous Version Bows

□



## FAR EAST REGION ASSIGN MEETING

*Tadaharu Yanai*  
*Taisei Corporation*

The 41th Far East Region ASSIGN (ADABAS Special Interest Group of Nippon) meeting was held in Tokyo on December 3, 1984, with 31 attendees from 23 companies.

Shimizu Constructions Co., Ltd. introduced Shimizu Quality Information Table system (SQIT) developed with ADABAS. In SQIT, 5 sub-systems are built with common code systems to transmit information smoothly among the stages of research & development, marketing, design, construction and maintenance.

Sumitomo Metal Industries, Ltd. introduced Office Automation in their Kashima ironworks. They are now keen on realizing office automation to improve their clerical efficiency by up to 30%. They explained their network system (s-net) via an optical communication line and office automation software which was installed.

Software AG presented a demonstration 'SOAR-SQ' (Screen Query), the information reference language composed of NATURAL and SOAR (Set Oriented Architecture of Request), explaining its features and functions.

*Susumu Okoba*  
*J G C Corporation*

The 42nd ASSIGN meeting was held in Tokyo on May 14. Mr. Yanai, ASSIGN Chairperson, presented the plan of activities for the year, 1985. The plan included holding ASSIGN meetings 3 times during the year. This is in addition to the usual meetings held by the six study groups which are divided into the following specific subjects:

- 1) Data Dictionary;
- 2) Performance;
- 3) Database Security;
- 4) Database Administrator;
- 5) Distributed Database; and
- 6) Technique of Prototyping.

The members who sign-up for the study groups, chose a group leader and sub-leader, respectively, then discuss how to manage each group and study the subject. □

## 2nd JOINT SPECIAL INTEREST GROUP MEETING

*Yasuhiko Katada*  
*Chairman, Joint Meeting Steering Committee*



*A few of the attendees.*

The 2nd joint meeting of Software AG's Special Interest Groups was held in Hakone from March 14 to 16. More than 130 attendees from 63 installations gathered from all over Japan. The group has made steady strides in its activities since it was founded 8 years ago.

Upon the users' strong requests and the increase in the number of members, the group was divided into 3 Special Interest Groups according to Software AG products: ASSIGN (for ADABAS), COM-LETE (for COM-LETE), and A-AUTO (for Advanced Automatic Operation System).

Each group was also divided into smaller groups, some two years ago, to make their activities significant. They had been engaging in research activities on specific themes. In order to make an announcement of their activities, the first Joint Special Interest Group meeting was held in March 1984, which proved very successful. As a result of this success, their own study has been accelerated and much more specialized, and produced the 2nd Joint Special Interest Group meeting this year as in the last year. On the first day of this year's meeting, Mr. H. Tanaka, Hokkaido University, gave an interesting lecture on "Human Development Over The Roman Report." Following Mr. Tanaka, four users introduced their own usage of Software AG's products. The day concluded with a dinner where the attendees had an opportunity to talk about mutual interests and exchange information.



*One of the many Research Presentations*

The second day, one user discussed his organizations use of Software AG's products. Following that, research presentations were given on 14 study subjects such as performance, Database Design, NATURAL, Database Recovery, Personal Computers, Database Administrator, Library Management, and Standardization of Operation. The contents of each presentation was very meaningful and questions and answers were actively exchanged.

During this meeting, the users exchanged technical information based on their actual work with Software AG products and discussed problems common to each other. The notable outcome of the meeting was that the Japanese users could develop close relationship among themselves. With such positive results, the Software AG Users' Group in Japan will continue to step up their activities. □

## 15th COM-LETE USERS' GROUP MEETING

*Yuzo Fukumoto  
Isetan Data Center*

The 15th COM-LETE Users' Group Meeting was held on May 14, 1985 at the Software AG, Far East offices in Tokyo.



*Greetings by one manager to the COM-LETE group.*

The meeting began with the selection of Mr. Yuzo Fukumoto of Isetan Data Center as the new chairman of the COM-LETE Users' Group on behalf of the ex-chairman, Mr. Yasuhiko Katada of Tokyo Sangyo Shinkin Bank, and Mr. Toshio Endo of Fuji Television Network Systems, Inc. as Sub-Chairman.

Following the selection of the new chairman, Mr. Katada reported that during the past year, 4 meetings were held with user presentations given which described their own systems. They also organized a Special Interest Group and studied about "Library Management" once each month.

The plan for fiscal year 1985 includes holding 4 meetings where users will be given and group study will continue. The theme of the study will be discussed at the next meeting.

The meeting concluded with Mr. Nagamori from Software AG, Far East explaining the 1984 Change/Enhancements. □

## EASTERN REGION

*Tom Clark  
SEI Corporation*

The quarterly meeting of the Software AG Users' Group was called to order at 9:00am on January 15, 1985, at the Holiday Inn in Crystal City, Virginia by President Tom Clark. Tom introduced Mike Ater, Vice President of Customer Service of Software AG of North America. Mike explained the responsibilities of the Customer Service Division and how it was formed. He presented a chart of the division of responsibilities of his group. Mike indicated what his group would be doing through QA testing of new SM's and releases before they are shipped to the clients. In response to questions from the audience, Mike indicated that SM06 was due to be shipped the next week. He was asked to look into the disappearance of the reference cards. Mike indicated that in his opinion an SM should contain no enhancements, only fixes. An ideal schedule would be to release SM's in 6 month intervals and Versions in 1-2 year intervals.

Tom introduced Larry Jayne of Software AG, who gave an explanation of the User Profile pilot program. Participation in the program will be voluntary. Information on the data base for each participant will include the products licenced, and the contact person. Initially, the program will be limited to one Account Rep in one region. The people who receive information will receive it on nationwide data. At the end of the pilot program Software AG will evaluate the effectiveness of the program and the resources required to run it and report back to the Users' Group.

Larry also announced the formation of a new type of user community called a BIG (Business and Industry Group). The first BIG, comprised of college and university users, met in Pullman, Washington. Other BIG's are being considered for the utilities, banking and insurance industries. Anyone interested in forming a BIG should contact Larry and he will have other users in your industry contact you.

Tom introduced Joe Gilley of Software AG who gave a brief update on what's new at Software AG. Joe announced that ADABAS was first in the IBM compatible data bases in the Datamation poll for the third consecutive year. ADABAS/VMS and NATURAL/VMS (ADABAS for the VAX) has many of the new features which will be on ADABAS V5. The NATURAL code is transportable between the IBM and the VAX. ADABAS is the highest performing DBMS for the VAX. Joe mentioned the ADABAS/VSAM Bridge which permits users to use the same application programs which previously accessed VSAM file to now access ADABAS files. □

## NORTHWEST REGION

*Alan Shue  
Manus Services Corporation*

The major topic of the meeting was Performance. Steve Bradley of Weyerhaeuser Company presented his organization's approach to ADABAS Performance in a Multiple Data Base Environment. Included were details of (1) why ADABAS Performance was addressed at Weyerhaeuser, (2) the process used to address the problems, (3) projects that were undertaken to correct the problems, and (4) future projects to address additional problems.

Our new Account Rep Cathy Lonsdale introduced Mike Ater, Software AG VP of Customer Service. Mike defined to us what his process will be for developing Customer Services to meeting "Customer Expectations". Mike stressed the importance of understanding customer expectations, gave us the charter to help improve customer relations by making suggestions for improving or correcting problems that we may have, and showed us a layout of his new organization.

The final portion of the meeting was reserved for discussion of ADABAS and NATURAL parameters used by each organization.

The major topics of the March 1 meeting were Software AG directions and security.

Stuart J. Miller, President and CEO of Software AG of North America, presented his findings of the company's current standards within the industry and where they plan on going. He reported that Software AG products are being maintained with strong technical and developmental support, that their products are strong products, the people quality is good (attitude and

expertise), the customers have valid concerns (COM-LETE, end-user products, information centers), and that the company tries to maintain a good public image by appearing at industry seminars, etc. Mr. Miller projected that the areas where the company would be going are into packaged industry specific applications, business segment packaged systems, and system development tools. He stressed that the company will not be a spreadsheet, word processing, PC environment. Mr. Miller stated that the company's strategy would be directed by the people who get the most out of their products and that their strategic directions would be: (1) move products to non-programmer desks and (2) provide products that operate in major hardware/software environments (IBM, DEC).

In 1985, Software AG's mission is to be the leading worldwide software supplier with the following guidelines:

- expansion of worldwide customer base;
- enhance company image to match product image;
- confirm strategy for sustained upward growth;
- continue product introductions consistent with established strategy;
- accelerate organizational effectiveness through people and communication; and
- employ customer service as marketing tools (Account Representative program)

Dean Sales, Software AG, discussed what the company has been doing to improve customer support (on-site customer visits, etc.), the areas of responsibility of the SSR (Sales Support Rep). Dean also discussed Software AG's view of security, some of the do's and don'ts, opinions and options of security, new features of NATURAL SECURITY in SM06, and the directions of security in general.

After lunch, elections of the regional officers were held. The following are our new officers:

Regional Rep  
Jim Hill (Washington State University)  
Program Coordinator  
Bill Anderson (WA Labor and Industries)  
Secretary/Treasurer  
Steve Bradley (Weyerhaeuser Company)  
2nd term

The final portion of the meeting was a general discussion on various types of security that are being addressed by companies. The following people presented a brief overview of some of the types of security being used: Ken Howard (University of Victoria) ADABAS User Exit 1 security, Keith Newsom (Washington Data Processing Service Center) ACF2, Jim Hagen (Washington State University) Vanilla ADABAS Security, Steve Stoyles (Weyerhaeuser Company) RACF, and Steve Baker (Multnomah County) NATURAL front end. □

## PACIFIC SOUTHWEST REGION

Dick Jones  
McDonnell Douglas

The January 25 meeting was hosted by The Aerospace Corporation, El Segundo, California.

Clola Ferris (Aerospace) gave an overview of the Aerospace Corporation. She talked about the company's organization and where the DBA section fits in. Clola spoke of the data base administration's goals, functions, hardware and software.

Duane Walker (Aerospace) then talked about the 5 data bases being used. Two are for testing, one is for prototyping, one is for a special production function and one is the production data base. He also reported on the disk layout of the data bases with the use of extents.

Paul Flick (Aerospace) talked about four pieces of software.

- a. *NATURAL Online Batch Job Submittal.*  
They created a NATURAL 'BATCH' command and a NATURAL front-end program to handle this. Paul went through the series of menus and its options and the code that generates the program.
- b. *ADABAS/TSO Online Utilities.*  
Paul discussed their online utility execution program which can reset DIB, reset DIB for a given job name, recover, ADAREP and other ADAVUS functions. He then talked about the CLISTS and menus for batch submittals.
- c. *COM-PLETE/ADABAS Zap Application.*  
They have created a zap library for each Software AG product with one member per fix. Paul then discussed their verification procedure which includes a master member that can verify that all the fixes in the library have been applied.
- d. *COM-PLETE Password Control System.*  
Paul described the Aerospace password control system being implemented. Passwords must be changed at least every three months with no repetition of passwords. The user's last five passwords and the date they were implemented are recorded on a protected VSAM dataset and are compared at logon time.

The February 22 meeting was hosted by Pacific Mutual Life Insurance, Newport Beach.

Roy Parkinson, Software AG Product Certification Specialist, gave a presentation about product certification. Roy stated that his department's mission was to improve the SMs and new releases. Product Certification's goals are effective testing, ensuring that the products are of optimum quality and continuously measuring product field performance. Roy spoke of his department's responsibilities: reviewing new products and releases in each stage of development (pre-production, pre-user beta testing and pre-release testing) and coordinating user beta site selection and testing. Product Certification's test review process includes checking the product, documentation, maintenance and education.

Kenn Ng (City National Bank), David Tanner (Aerospace), Jean Roberts-Mertan (Nissan) and Leo Webb (Smitty's) led an informal discussion of PREDICT at their individual sites. Subjects covered included SM3 conversion problems (e.g. if there are more than 16 comment lines, they need to be converted to long messages), migration (some problems with batch mode migration can be solved by using a prompt mode, one command/line, format) and synonyms (make sure that null suppression is off for the BC field).

The March 24 meeting, hosted by Xerox, El Segundo, included a presentation by Sharon Remer from Xerox. She gave an overview of the Printing Systems Division of Xerox and their development of a NATURAL on-line customer support system, and computerized problem tracking system. Dick Jones, McDonnell Douglas Corp., led an informal discussion of NATURAL SM06 installation and implementation.

The April 26 meeting was hosted by Jim Wakefield from Capital Data Systems. Ed Simon, Management Applied Programming, discussed the implementation of a unified security system in a COM-PLETE environment.

Mark Ambrose and Ted Dumetz, both from Tigor, reviewed two different approaches to increasing the size of a data base. Dick Jones, McDonnell Douglas Corp., led a discussion on the use of NATURAL programming standards. A pole indicated that about half of the attendees had programming standards invoked at their installations. Most of the reasons expressed for using standards were for maintainability and readability, with a few citing performance. The new regional officers for 1985-86 were announced including:

- *President/Regional Representative*  
Gary Hart, CCH Computax, Inc.
- *Vice President*  
Jim Wakefield, Capital Data Systems
- *Secretary*  
Ed Simon, Management Applied Programming
- *Treasurer*  
Edie Nealigh, CCH Computax, Inc. □



## PACIFIC SOUTHWEST REGION

*Ed Simon*

*Management Applied Programming, Inc.*

The June 28, 1985 meeting was hosted by Software AG at the Sheraton Plaza La Reina, Los Angeles. There were thirty eight attendees.

Larry Jayne, Users Group Liaison for Software AG talked about the users' conference in Nashville. There were 1170 people registered and Software AG is expecting close to 1400 people for the next conference (at the San Diego Sheraton Harbor Island in May 1986). Larry gave some of the results of the survey taken at the convention. The most popular parts of the conference were Edwin Newman's speech, classes, location (Opryland Hotel), and the interaction with other users. There were requests for more advanced technical classes and to reduce the number of concurrent sessions.

Larry said that the next Users' Group newsletter should be cut in August. He talked about the change/enhancement process which is now being done quarterly. He also reported that the user profile pilot system (to provide information on similarly configured users) is being tested in New York.

Ashton Tate gave a presentation on their products dBase III and Framework.

After NATURAL Connection downloads records from the data base, dBase III can be used for report generation and editing records. dBase III's retrieve options (for/while, fields, counts) and file structure were demonstrated.

Framework, using the data from dBase III, can then generate graphs and spreadsheets, combine data base fields, do text processing, and generate reports combining all of the above features.

Bill Chapman, Software AG discussed extending PREDICT's functionality using NATURAL. Topics covered included PREDICT's infrastructure, the role of user exits and how they are invoked (Bill gave an example of the ACMDBEX exit), PREDICT modules AND "MENU" hierarchy, default global variables (an "EDIT VARIABLES" display will not show global variables that start with "+SYS"), a driver to prep dictionary fields, and the dictionary DDM. □

## EASTERN CANADA REGION

*John Hewitt*

*Hartt & Page Ltd.*

The April 30, 1985 meeting of the Software AG Users Group of Eastern Canada was hosted by John Horrigan of Imperial Oil in Toronto and was attended by 36 individuals representing 25 organizations. Jan Warren opened by discussing extensions to PREDICT developed at Consumers Gas. These include several new reports describing dictionary elements and cross references as well as exception reporting to monitor documentation status for projects.

Ted Hillis followed with a presentation on Large Blocking to improve data base performance. Ted outlined the steps taken to increase the block sizes (zaps, etc.) as well as performance improvement expectations. In the end, improvements were much greater than what was anticipated but the core requirements increased as well.

Mike Ater of Software AG then described new directions for product support along the lines of product certification, delivery and customer support.

The afternoon was taken up with a demo of SUPER NATURAL by Gene Miklovich and a presentation on ADABAS (VMS) by Andy Coutts. The intent of SUPER NATURAL is to provide end-users with a development tool without giving up needed database administrator control. ADABAS (VMS) is a full-fledged version of ADABAS and which runs under the VMS operating system.

Jan Warren was elected to be the representative for the current year and she will be commencing her duties at the next meeting, scheduled for June 25, 1985 in Ottawa. □

## EASTERN CANADA REGIONAL REPORT

Jan Warren  
Consumers' Gas Company

The Eastern Canada Region Users' Group met on June 25, in Ottawa. The meeting was hosted by Yves Roy of The University of Ottawa and attended by 37 users from 19 companies.

The meeting began with the administrative business and review of the SAGGROUP Executive Committee meeting notes. The users discussed the regional realignment which will include the formation of a Western Canada Region. The users of Western Canada have already petitioned the Executive Committee to form their own region and that petition was voted on and approved, subject to the clarification of the boundaries to be done in October by the Executive Committee.

Following a coffee break, Gene Miklovich presented Data Modelling and PREDICT. This was of interest to those who are in the process of designing new systems or re-designing corporate systems. I included a discussion on first, second and third nominal form and how to set up a data base within PREDICT and define the files in this manner.

The final presentation of the day was also given by Gene Miklovich. He provided an explanatory demonstration with the use of transparencies, of the Computer Assisted Instruction (C.A.I.) facility. Gene described the three basic components - the presentation component, the administration component and the authoring system. C. A. I. was also demonstrated online at the conference in Nashville. It was designed and written here in Canada to provide the convenience of an instant classroom anytime, anywhere.

The meeting concluded with coffee and the decision to hold the next meeting on September 24. The topics to be presented and discussed will include REVIEW, NATURAL AF, ADABAS/VSAM BRIDGE and File management for predicting file growth and DASD space. □

## ROCKY MOUNTAIN EAST REGION

Mike Wagner  
General Electric

The first official meeting of the Rocky Mountain East User Group was held on March 12 in Denver, Colorado. The business portion of the meeting got off to a lively start with a discussion of regional group finances. The remainder of the business session involved the election of regional officers, establishing their responsibilities, and setting dates for future meetings. Bill Speaks of Forest Oil was elected Regional Representative. Judy Lochrie of American Home Video was elected to the position of Secretary/Treasurer/Vice-Chairman. Tom Visher of Citicorp Diners Club, and Darrell Kopf of Midland Energy were elected to share the position of Program Coordinator for regional user group meetings, and to also assist local user group meetings with this function.

Art Burkett, Director of the Customer Support Center, discussed changes within the Denver office, and introduced Mr. Doug Judson the new Denver Branch Manager.

In an effort to provide Software AG staff members additional training, it was suggested to Art that Software AG consider sending Denver based technical personnel to local installations when the user and Software AG technical support feel that having an individual on-site could gain hands-on experience by personally observing and assisting users at their sites. Art will be following up on this suggestion.

John Kriegbaum, a Software AG Technical Support Representative, concluded the meeting with a presentation on considerations for using the PRE-FETCH option in ADABAS. The key to using this option, which is implemented with a new ADALNK, is to thoroughly analyze the potential application before implementing. Software AG will be distributing the new code and documentation with SM09.

The Denver local user group meets on a monthly basis for informal half-day meetings. The most recent meeting was hosted on April 8 by Tom Visher of Diners Club who chaired a very informative round table discussion of PREDICT. Darrell Kopf of Midland Energy gave an extremely interesting presentation on integrating PCs into the corporate environment. Specifically, he provided excellent guidelines for MIS in handling the runaway PC syndrome that now confronts many companies. □

## SOUTHEASTERN REGION

*Laura Olcott*

*E. I. Dupont de Nemours*

The March 1, 1985 meeting was a very full day of presentations from users, consultants and Software AG.

The first presentation was given by John Yodsnukis from System Development Corporation. He discussed some of the problems he had encountered with the NATURAL Buffer Pool Manager released with SM6 and gave some pointers for those who have not installed it yet.

Doug Martin from Price Waterhouse gave an excellent presentation on relational data base design. His talk touched on conceptual, logical and physical design and offered some design shortcuts.

Larry Cook, Manager of Product Certification at Software AG, discussed the process Software AG goes through to assure the quality of new version and maintenance level releases of all products.

Dennis Gandy from Software AG was the final speaker of the day with a demonstration of SUPER NATURAL. □

## SIERRA PACIFIC REGION

*Bob Irvine*

*Wickland Oil*

The June 4th meeting was hosted by the University of California, Division of Library Automation at their facility in Berkeley, California.

In order to increase user understanding of the organization and responsibilities of the Software AG Customer Support Center, in Denver, Art Burkett, Director of the Customer Support Center, provided an overview of the functions and duties of the center. He outlined the handling of customer requests and gave some tips on how to help the Support Center be more effective and efficient. He also explained some of the changes that are currently being made to improve service as well as future plans to increase their ability to handle questions and problems. Art also answered many questions posed by the attendees concerning the experiences they have had with the center.

The meeting concluded with a presentation by John Lowe of the University of California, Berkeley, on the online catalog system for the university library system. John demonstrated the system and explained the workings of the system which is written in PL/1 using NATURAL calls. □

## ADABAS PRODUCT REP'S REPORT

A. C. Roda  
Planning Research Corporation

First, I want thank all the users who supported me during the recent election. I will do my utmost to represent and serve the user community with their best interests in mind at all times.

Second, I would like to solicit your input for future newsletters. Any topic relating to the use of ADABAS is welcome plus whatever else you may want to say (i.e., product direction, integration, version/release migration, etc.) Software AG may find me rather "noisy" from time to time, but that's how I perceive part of my job.

This report was developed on rather short notice, so there is no technical discussion of user experiences, however, I anticipate each subsequent newsletter to contain some technical discussion (please don't make them be all mine.)

With ADABAS Version 5.1 coming upon the horizon, I'm hoping to disseminate out to the user community as soon as possible the experiences of those users who elect to convert early on. Conversions are never painless, but it is my

intent to help make the next conversion a little less painful by "spreading the word". So, your future beta test sites out there, we want to hear from you.

Some comments regarding change/enhancements. Part of my job is to review change/enhancements submitted by the user community for ADABAS. In reviewing the latest batch, it became apparent to me that a good number of the change/enhancement requests were for features/capabilities which already exist (albeit sometimes not documented very well.) I would urge you to "sniff around" a little bit before submitting a change/enhancement. Waiting for the change/enhancement to be processed through the pipeline can take quite a while (although the SAGGROUP Executive Committee has taken steps to improve this process.) Your inquiries should not be limited to Software AG. Call your fellow users, those you know and even those you don't know. In six years, I've never encountered any user who wasn't cooperative and helpful. Hopefully, the user Profile System will progress past the pilot stage and be helpful in getting users to communicate more.

Thanks again for your support and I look forward to being your ADABAS Product Representative for the next two years. □

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## NATURAL PRODUCT REP'S REPORT

David Alexander  
Bud Antle

My report is taken up this time by administration and a review of the recent International Users' Conference in Nashville.

First, I am reaffirming the distribution of a NATURAL Standards document to all licensed NATURAL users: this occurred in December 1984. This activity will now be coordinated by Ted Venema (of NATURAL Techniques SIG fame.) Please provide information to Ted, so that this document can continue to evolve. According to the number of people who actually requested this, it seems to be of some interest. Your continuing participation benefits all users.

Second, I have provided the following list of topics to Software AG, as candidates for technical articles by their staff. Let me know if there are others you would like to have addressed. We are hoping to include responses to these in future newsletters as a means of promoting user understanding in various areas within NATURAL.

- Performance implications of using user views which are a subset of physical files.
- Data formatting and transmission for efficient screen manipulation.
- Techniques and reasons for compaction of object module size.
- Issues affecting efficient operation of NATURAL programs under COM-LETE and CICS.
- Organization and use of NATURAL internal areas and buffers.

Third, the Nashville Users' Conference was, as usual, full of significant items for the future. Both NATURAL V2 and NATURAL/CONNECTION V2 are imminent. The latter will be much more functionally complete than V1, and in addition, with the availability of a NATURAL syntax checker on the micro, points the way for the future. Software AG is definitely indicating the intention to have NATURAL execute on the micro, so we can look forward, in the not so distant future, to making PC's the programmer workstation.

Note that in NATURAL V2, the intention is to have programs re-entrant and for them to execute from the buffer pool. This is a welcome development, with implications for efficient execution and reduction of virtual storage requirements. Experience with SM6 has shown much benefit from the buffer pool. In our installation, over 80% of the calls to the system file are satisfied by the buffer pool, reducing our I/O overhead for this release seems to be few, although a few start up problems have been encountered. For example, CICS users must link the component modules together in the sequence documented otherwise problems may ensue.

Both the Technical Survey and the Change/Enhancement process indicated a strong user desire for documentation on NATURAL internals. Software AG has agreed to look into the possibility of providing this for Version 2. While the Change/Enhancement process has proven useful in focusing on more current problems and functionality, Software AG has indicated a desire for user input specifically on the topic of futures and directions. There is a possibility that such solicitation from you the users may be set up on a more formal basis this year. If you have any ideas for NATURAL, and/or you would like to participate, please contact me.

In terms of soliciting articles for the newsletter from the user group at large, this has proven to be a difficult task from the "top down". As a Product Representative, I have limited exposure to you as individuals, and, therefore, have difficulty in knowing who is doing something, which may deserve wider exposure. In order to gain this information, I will be requesting the Regional Representatives to send me copies of their minutes (albeit untyped) ahead of the newsletter deadlines, in order to contact users with something to contribute.

Some users have contacted me about comparing COBOL execution to NATURAL in terms of speed & efficiency. While nothing seems to have been done rigorously on this topic, I do have an article that appeared in Datamation in January 1984. Let me know if you would like a copy.

For those of you who may not be up-to-date with NATURAL releases/fixes, I am informed that Jon Church in Reston will provide you with a list of outstanding fixes for NATURAL products. Please contact him directly with your request.

Finally, I received the following tip while attending the recent Users' Conference. It is a way of getting around coding field names when storing records. Thanks to Mary Henderson of Marathon Oil.

```

INPUT #PERS (N8)
FIND PERSONNEL WITH PERSONNEL-NUMBER = #PERS
IF NO RECORDS FOUND DO
  PERSONNEL-NUMBER = #PERS
  INPUT (AD=IM) PERSONNEL-NUMBER (AD=O)
  / NAME / FIRST-NAME AGE
  STORE PERSONNEL SAME RECORD
  END TRANSACTION
DOEND
LOOP
IF *NUMBER (0020) > 0
  REINPUT 'ALREADY ON FILE'
END

```

□

## NATURAL PROGRAMMING TIPS

*William Martin*  
Cornell University

It is very important that NATURAL programming standards be drawn-up so that programs are readily understandable from programmer to programmer. The following are a few ideas which I've found useful in my programming work. Read through the examples below and think about them in terms of the programming standards which exist at your respective shops.

### Group Variables Together Logically

Keep all variable declarations in alphabetical order. This is simple if you declare one variable per line, align all name and attributes, and use the SORT command in XEDIT. Declare all your variables which logically belong together using one RESET statement. Define all your general variables using one RESET statement, and use one RESET for each array group, which must be declared contiguously. This makes variables easier to find.

### Variable Placement

Place all of your variable redefinitions in one section, right after the variables declarations. Declare variables at the top of the program, not amidst the main program logic.

```

0010  RESET
0020      #ACTIVITY-NAME-GROUP          (A50)
0030      #ACTIVITY-RETURNS            (A100)
0040      #AREA-TELEPHONE              (A10)
0050      #CTR                          (N6)
0060
0070  RESET
0080      #ARRAY1                       (A80)
0090      #ARRAY2                       (A80)
0100      #ARRAY3                       (A80)
0110      #ARRAY4                       (A80)

```

The above section is much better than the following:

```

0010  RESET
0020      #CTR                          (N6)
0030      #ACTIVITY-NAME-GROUP          (A50)
0040      #ACTIVITY-RETURNS            (A100)
0050      #ARRAY1                       (A80)
0060      #ARRAY2                       (A80)
0070      #ARRAY3                       (A80)
0080      #ARRAY4                       (A80)
0090      #AREA-TELEPHONE              (A10)

```

## NATURAL Subroutines

Use subroutines wherever possible. Declare them at the beginning, before the main procedure. Delineate them with a line of `**s`, and give the name of the subroutine on the RETURN statement in a `/*` comment. Mark all CLOSE LOOP's with line reference numbers and mark with a comment. Where possible, declare subroutines in alphabetical order. This will make them easier to find when reading programs.

### Using Line Reference Numbers

Always use line numbers when referencing ADABAS fields. In one program which didn't use them, the variables LAST-NAME FIRST-NAME on line 0080 referenced the FIND statement on line 0010 instead of the one on line 0070.

```
0010 FIND PA-BIO WITH BIO-ID = '123456'
0020     PERFORM SECOND-FIND
0030*
0040 .....
0050 DEFINE SUBROUTINE SECOND-FIND
0060 .....
0070     FIND PA-BIO WITH BIO-ID EQ '654321'
0080         WRITE LAST-NAME(0070) FIRST-NAME(0070)
0090         CLOSE LOOP (0070) /* FIND BIO
0100 .....
0110     RETURN /* END SUBROUTINE SECOND-FIND
0120 .....
0130*
0140     CLOSE LOOP (0010) /* FIND BIO
```

### Using ISN Sets

Always release an ISN set before declaring it. NATURAL running in MVS gets upset if you reuse an ISN set name without first issuing a RELEASE SET 'setname'.

### Clearly Mark Debugging Statements

Mark all Debug statements with a `/* Debug` comment. It makes things easier to clean up when it comes time to make the leap from test to production.

### Reading and Writing Work Files

NATURAL/CMS does not like to read work files written in an earlier program, even though the manual says you can. MVS doesn't seem to care.

### Writing NATURAL Output To Tape

When writing a print file to an OS data set (tape or disk), define your DCB for the NATURAL print file as LRECL=133, RECFM=FBA, BLKSIZE=1330, DEN=4. 'DEN=4' causes output to be written at 6250 bpi; use DEN=3 (1600 bpi). Always define your DCB explicitly, or funny things will happen when NATURAL substitutes its own defaults.

### Assigning And Re-Initializing Variables

Always explicitly reinitialize user variables by using IF-THEN-ELSE logic when assigning variables. Otherwise, values left over from a previous loop iteration might cause a problem. For example:

```
0010 IF MIDDLE-NAME(1234) NE ''
0020 THEN #MIDDLE-INITIAL(A1) = MIDDLE-NAME(1234)
0030 ELSE RESET #MIDDLE-INITIAL
```

If we didn't explicitly reset #MIDDLE-INITIAL, there would be problems when #MIDDLE-NAME was blank, since #MIDDLE-INITIAL would still contain the old value.

### Using FOR Loops

A common error occurs when the beginning range of a FOR loop is greater than the ending value. This would result in a NATURAL execution time error. In the following example, an error will occur if C\*MAJOR-CREDIT is zero.

```
0010 READ FINANCE
0020 OBTAIN CREDIT-CARD(1-99)
0030 FOR #J(N7) =1 TO C*CREDIT-CARD
0040     MOVE INDEXED CREDIT-CARD(0010/1) <#J>
           TO #CREDIT-CARD(A10)
0050 CLOSE LOOP(0010)
```

A solution to this would be to set the FOR loop to execute once for all possible occurrences, and then escape when the C\* limit has been reached. The effect is the same, but the method is a much safer one.

```
0010 READ FINANCE
0020 OBTAIN CREDIT-CARD(1-99)
0030 FOR #J(N7)= 1 TO C*CREDIT-CARD
0035 IF #J GT C*CREDIT-CARD THEN ESCAPE
0040 MOVE INDEXED CREDIT-CARD(0010/1) <#J>
      TO #CREDIT-CARD(A10)
0050 CLOSE LOOP(0030)
0060 CLOSE LOOP(0010)
```

### Multi-Value Sorting

Sometimes it is necessary to sort on multi-value fields, and to have the some record appear in a report several times. In this example, an alumnus is involved in many alumni activities and we want him to be listed on a report in each of the categories. To do this, we take advantage of (usually annoying) aspect to the SORT BY statement: that it closes all loops. Feed a record into the sort for each occurrence in the group.

Another feature of the NATURAL SORT BY statement is that it includes all user variables defined above it in the sort. This would make your sort unnecessarily large. An easy solution, which I used below, was to define the INIT-VARIABLES subroutine containing all user variables. This method keeps the variables out of the sort, but at the same time allows an easy way to initialize them before they are used.

```
0310 PERFORM INIT-VARIABLES
0320 FIND PA-BIO WITH ACTIVITY-CODE = '1'
0330 OBTAIN ACTIVITY-CODE (1-99)
0340 #CSTAR(N2) = C*ACTIVITY-CODE(0320)
0350 FOR #J(N2) = 1 TO 99
0360 IF #J > #CSTAR THEN ESCAPE
0370 MOVE INDEXED ACTIVITY-CODE(0320/1) <#J>
0380 TO #ACTIVITY-CODE(A3)
0390 IF #J = #CSTAR THEN ESCAPE
0410 SORT BY #ACTIVITY-CODE
0420*
0430 DEFINE SUBROUTINE INIT-VARIABLES
0450 RESET #VAR1(A10) #VAR2(A10) ...
0470 RETURN /* END SUBROUTINE INIT-VARIABLES
0480*
0490 WRITE LAST-NAME(0320) FIRST-NAME(0320) #ACTIVITY-CODE
0500 CLOSE LOOP(0320) □
```

## NATURAL Security SIG Regroups

*Orville Mason  
R. J. Reynolds Tobacco Co.*

On Wednesday, May 22, at 11:00 a.m., the NATURAL Special Interest Group rolled up their sleeves and proceeded to hammer away at the difficulties facing them with the implementation of various SM levels of the NATURAL Security System.

Our thanks to Jack Beyer of R. J. Reynolds Industries for his service as chairman of this SIG through 1984. Jack's responsibilities have been increased to such a degree that he could no longer devote the time required to chair our group.

When I returned to my office the following Tuesday, I began counting the names of those who expressed their interest in continuing the SIG. So far, there are 115 of us.

Meanwhile, I have decided to utilize the SAGNA demo Personnel file to keep track of the NATURAL SIG membership. I will distribute a membership listing as soon as possible.

As you probably know, "our" workshop session was the only one recorded at the Nashville Users' Conference. The tape recording number is 22 on the order form.

I also attended session (G4-H4) NATURAL Administration Techniques Class conducted by Jim Thomann of Software AG. It was among the very best presentations at the conference. Fortunately, for all of us, the class was presented twice. The second presentation (P3-Q1) was recorded. The tape numbers (two cassettes) are 23 and 24. For those who have not yet installed SM06 of NATURAL, you would do well to acquire these recordings along with pages T-211 through T-269 of the published conference Proceedings.

Finally, our hats are off to Software AG for another fine conference, and especially to Larry Jayne. Without his help, the aforementioned recordings would not have been available. □



## GETTING STARTED USING NATURAL SECURITY

*Jim Kline*

*Colorado Interstate Gas Co.*

This article is intended to give one approach to implementing NATURAL Security. When we at Colorado Interstate Gas Co. (CIG) installed NATURAL in early 1984, we began to use NATURAL SECURITY immediately. We use it to control our software development, security of NATURAL systems utilities as well as our production NATURAL environment.

Our philosophy is to set up an application for each major system that we are developing. In our case, our three year development effort will contain about seven major systems. Thus, we have set up seven applications all beginning with the prefix "APP-". Each application's security profile has some restrictions, including no AD HOC and a source code line limit. I have set up two major categories of users; groups and administrators. The only administrators on our system are the DBA, the data base analyst and a senior project leader. All the system applications (SYSDBA, SYSMAIN, SYSDIC, SYSDDM, etc) are linked to these three administrators alone. The only system application that is linked to other users is PREDICT. (I will discuss this linkage later.)

The majority of our remaining users are members of groups. We have one group containing all our application development staff members. Each staff member has a TSO userid and we utilize this id as our NATURAL Security id. The application development group is linked to each application using the 'L' linkage which defaults to the standard security profile. Each user department supervisor in our company has set up user groups with varying degrees of access permission. I set up a NATURAL Security group for each of these groups and allocated the individual TSO userid's to them. Then I follow the supervisors' guidelines in linking the groups to the applications. I used the 'A' (authorize) linkage option and disallowed nearly all command options except for RUN, EXECUTE, GLOBALS, HELP and MAIL. I disallowed individual program execution based on the supervisor's instructions. Thus, when a user logs onto an application, he/she is not permitted to look at the developed software or the DDM's that are available to the application. We do allow a limited number of users to write their own NATURAL code. In this instance, I set up a special application and linked the users to the application with a wide range of limitations (all contained in the default security profile.) I disallowed the execution of update programs, limited the size of the programs to 200 lines, limited the data base accesses to 250 and disallowed all NATURAL update statements. Thus far, this method has worked satisfactorily but I continue to monitor it daily.

I am currently allowing the application development staff access to PREDICT. The application development group is authorized to use PREDICT but I disallowed execution of update programs, NATURAL update statements and certain programs. The programs I disallowed include GENOB, INCOB, and MNTOB which does not permit the developer access to generate, incorporate a maintenance option. The only feature available to them is retrieval.

Finally, I have set up special groups for batch NATURAL runs. These groups are linked to the applications to allow large numbers of data base accesses. This is accomplished by using the 'A' (authorize) and increasing the limit parameter to an appropriate amount. Thus, all batch NATURAL jobs have the same NATURAL logon id and password for each application.

If you have any questions or comments on our approach, please feel free to call me at (303) 473-2300.

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## COM-LETE PRODUCT REP'S REPORT

Jim Lee

CCH Computax, Inc.

I'd like to take a few lines to update you on the COM-LETE related activities that occurred at the recent International Software AG Users' Conference in Nashville.

First of all, COM-LETE representation in SAGGROUPE changed hands at the conference. Ron Hoover of Pennsylvania State University was elected to the COM-LETE Product Representative position. Ron's term will run for two years. In speaking with Ron at the conference, he seems eager to take an active role in SAGGROUPE and I'd like to wish him well in his new position. All the COM-LETE Special Interest Groups (SIG) were assigned new chairpersons at the conference as well. My thanks go out to last year's SIG chairpersons who contributed to the conference and put out that extra effort during the year. The new SIG Chairpersons for the following year are:

- *Tools*,  
Ed Simon of Management Applied Programming;
- *Performance and Tuning*,  
John Kaye of Formost Insurance;
- *Technical Support*,  
Jim Lee of CCH Computax.

Much discussion at the various COM-LETE presentations involved the upcoming release of COM-LETE. As of conference time the next version of COM-LETE (4.4) was expected to go into beta test sometime late this year. A few highlights of the next release are:

- 3270 emulation support for ASCII-type terminals;
- Support for the new COM-LETE security package;
- Support for the performance monitor. At conference time there was no decision whether or not the monitor will be a chargeable item;
- Improved VTAM support;
- Improved documentation;
- Improved support for MVS/XA environments by moving some internal buffers above the 16Meg line. This should provide some welcome relief for XA sites that are currently pushing the limits of their private area for COM-LETE.

Finally, I'd like to discuss COM-LETE technical support. As the new chairman for the Technical Support SIG, I'll be focusing my efforts on obtaining timely information about COM-LETE fixes and promoting its distribution. I am optimistic about this as the Software AG technical support management in Denver expressed interest in promoting some timely distribution of information about fixes. If you have any ideas, problems or success stories you would like to share in the area of technical support, please give me a call at 213/640-3270.

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## ON-SITE SERVICE FOR SOFTWARE AG CUSTOMERS

Paul Peterson  
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Recently, Software AG established the On-Site Service Group to provide help for customers with performance, tuning, and planning problems. This group is comprised of extremely experienced personnel with in-depth knowledge of all Software AG products.

The On-Site Service Group will provide an analysis of your Software AG system - a Service Package Review - offering the following:

- On-Site Performance and Tuning - To identify problems in performance, tuning, operational, and educational areas. It will also give you an overview of problem areas such as file design, coding techniques, and processing bottlenecks.
- On-Site Custom File Design - To help you create the best file design for the application based on the usage of your system.
- On-Site Custom Planning - To help you plan for the future use of your data base. It will direct you to what you should be looking at and what data is necessary to collect for planning installation needs, i.e., Software AG products, additional computer resources, etc
- On-Site Custom NATURAL Systems - To help you identify problems your shop may have picked up with NATURAL usage and bad programming techniques.
- On-Site Custom Recovery Procedures - To aid you in making sure that all the needs for recovery of your critical data are met. Suggested procedures will be based on these needs and a document will be sent to you to work with and change as your needs change.

All On-Site Service Reviews will include two (2) days of on-site analysis with a management wrap-up meeting on the second day, a written report, and a one (1) day on-site follow-up after three months.

In the management wrap-up meeting, our Technical Specialist will discuss what he/she has found and what improvements and/or modifications should be made. This will be followed by a written report to your management outlining our findings and areas that need attention.

This service is intended to be an educational experience for your key staff to reinforce their knowledge and also to learn new techniques for the performance and tuning of your system.

If you are interested in this type of paid service review, please contact your local Account Representative.

## SOFTWARE AG EDUCATION

Stan Maring  
Software AG

Software AG education means quality! We are constantly striving to improve our courses, our instructors, and our facilities. Our ongoing goal is to provide the finest, most up-to-date training available on Software AG's many products. To this end, we would like to share with you news of several exciting new developments, each of which is meant to improve the level of product training offered to your organization.

We take great pride in announcing the opening of our "DBA Skills" classroom. This specially designed classroom will be the exclusive home of our most popular course "ADABAS DBA Skills Workshop." This intensive five day course covers the basic tools needed by the DBA in their day-to-day activities. The new "DBA Skills" classroom will enable us to present this heavily terminal oriented workshop course several times each month. In order to guarantee a maximum amount of personalized attention, the restriction limiting the number of students to a maximum will be continued. Since this course is consistently "sold out", early enrollment is strongly suggested.

To help celebrate the opening of the new "DBA Skills" classroom, we are pleased to announce a special \$1,000 DBA Skills team discount. Beginning June 1, 1985, organizations sending more than one employee to the same scheduled "ADABAS DBA Skills Workshop" will receive a \$1,000 tuition discount for each additional member of the team. This special applies only to the "ADABAS DBA Skills Workshop" course and requires that all members of the team work together to complete workshop assignments.

Whatever your need for Software AG product training, we urge you to consider having a Software AG instructor teach the course at your facility. Onsite classes can be cost justified for very small groups since the tuition cost per student is much lower than public classes and expensive student travel costs are not incurred. In addition, our onsite fee includes all instructor travel expenses and materials for up to 20 students. For more information, contact your Account Representative or call one of our Education Registrars at 703/860-5050.

We have temporarily omitted Denver 1985 Public Education from our scheduled classes while we investigate training facilities. Later this summer, we hope to announce an expanded schedule with information about new facilities and new course offerings.

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- Tape 22 **NATURAL SECURITY**
- Tape 23 **NATURAL ADMINISTRATIVE TECHNIQUES, PART I**
- Tape 24 **NATURAL ADMINISTRATIVE TECHNIQUES, PART II**

CHECK BOXES FOR TAPE SELECTION

To expedite orders, please include program #693-85R

**ALL TAPES COVERED BY UNCONDITIONAL LIFETIME GUARANTEE**

• ALL SALES ARE FINAL • Returned defective tapes will be replaced free of charge • California residents add 6 1/2% sales tax • Shipping charges are \$1.00 for first tape and \$ .50 for each additional tape up to \$ 5.00 maximum • FOREIGN ORDERS ADD 20% FOR HANDLING AND SHIPPING SURFACE SHIPPING ADD 10% • We accept Visa, Master card, American Express and personal and company checks • MINIMUM CREDIT CARD ORDER IS \$20.00 • MAIL ORDERS: ALLOW 2-4 WEEKS FOR DELIVERY • MAKE CHECKS PAYABLE TO:

**AUDIO STATS EDUCATIONAL SERVICES**

Check enclosed  Please charge my:  Visa  Mastercard  American Express

Account Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Signature \_\_\_\_\_

Ship to (PLEASE PRINT):  Please send me the complete set of tapes for **\$165.00**

Name \_\_\_\_\_

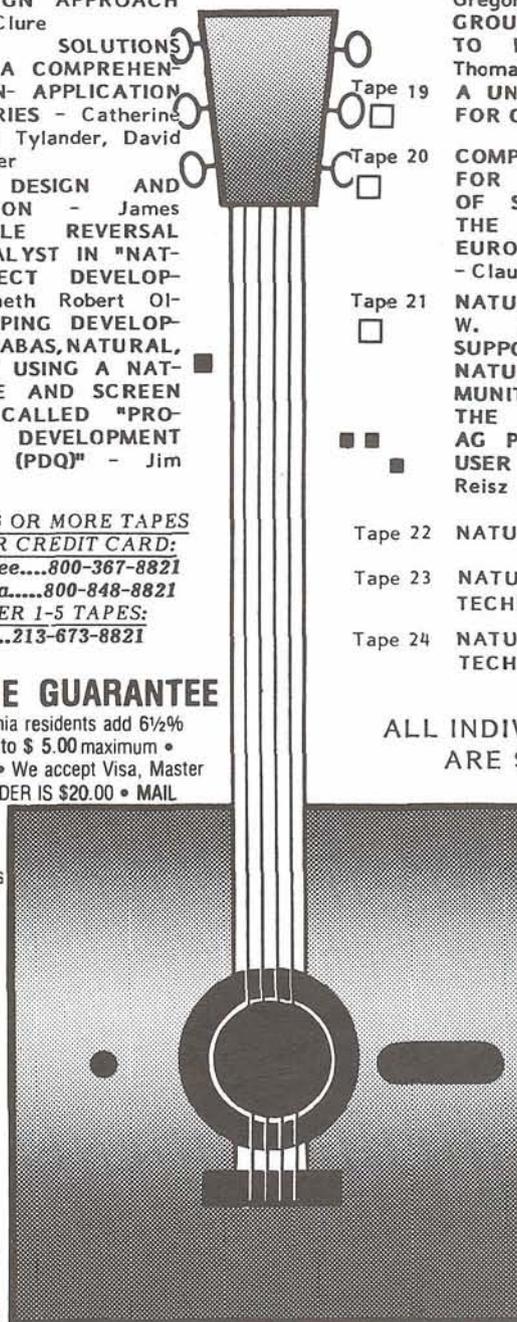
Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Total Price \$ \_\_\_\_\_ Shipping \$ \_\_\_\_\_

Sales Tax \$ \_\_\_\_\_ Amount Enclosed \$ \_\_\_\_\_

**SEND THIS FORM TO:**



**AUDIO-STATS EDUCATIONAL SERVICES**  
924 N. Market St., 2nd Floor, Inglewood, CA 90302

ALL INDIVIDUAL TAPES  
ARE \$9.00 EACH

DISCOUNTS	
1-5 Tapes	\$9.00 each
6-11 Tapes	\$8.50 each
12 or more Tapes	\$8.00 each

COMPLETE CONFERENCE	
List Price	\$198.00
You Save	\$33.00
Complete Set	\$165.00

EACH TAPE IS 90 MINUTES IN LENGTH BUT ACTUAL LENGTH OF RECORDINGS MAY VARY DUE TO LENGTH OF PROGRAM

FREE CASSETTE TAPE ALBUM WITH MULTIPLES OF 6 OR 12 TAPES PURCHASED

**May 19-23, 1985**  
**Nashville,**  
**Tennessee**

# CHANGE/ENHANCEMENT REQUEST FORM

## ADABAS

<input type="checkbox"/> ADABOMP	<input type="checkbox"/> MPM/NUCLEUS	<input type="checkbox"/> SECURITY
<input type="checkbox"/> CTCS	<input type="checkbox"/> NET-WORK	<input type="checkbox"/> UTILITIES
<input type="checkbox"/> DOCUMENTATION	<input type="checkbox"/> ONLINE SERVICES	<input type="checkbox"/> VM
<input type="checkbox"/> INTERFACES	<input type="checkbox"/> PERFORM. & ACCTG	<input type="checkbox"/> OTHER

## COM-LETE

<input type="checkbox"/> COM-PASS	<input type="checkbox"/> NUCLEUS	<input type="checkbox"/> TERM. SUPPORT
<input type="checkbox"/> DOCUMENTATION	<input type="checkbox"/> PERFORM. & ACCTG	<input type="checkbox"/> UTILITIES
<input type="checkbox"/> FILE I/O	<input type="checkbox"/> SECURITY	<input type="checkbox"/> OTHER
<input type="checkbox"/> INTERFACES		

## NATURAL

<input type="checkbox"/> DDM & DB	<input type="checkbox"/> LANG. FUNCTIONS	<input type="checkbox"/> SYSTEM FUNCTION
<input type="checkbox"/> DOMUMENTATION	<input type="checkbox"/> LANG. INTERFACE	<input type="checkbox"/> TP & OS INTERFACE
<input type="checkbox"/> EDITOR	<input type="checkbox"/> MAIL CONNECTION	<input type="checkbox"/> SECURITY
<input type="checkbox"/> EDUCATION	<input type="checkbox"/> PERFORM. & ACCTG	<input type="checkbox"/> 'SYS' FUNCTIONS
<input type="checkbox"/> GRAPHICS	<input type="checkbox"/> SYSTEM PARAM.	<input type="checkbox"/> SUPER NATURAL
<input type="checkbox"/> I/O	<input type="checkbox"/> NATURAL/CONNECTION	<input type="checkbox"/> OTHER

## PREDICT

<input type="checkbox"/> CROSS REFERENCE	<input type="checkbox"/> GRAPHICS	<input type="checkbox"/> USER SUPPORT
<input type="checkbox"/> DOCUMENTATION	<input type="checkbox"/> INTERFACES	<input type="checkbox"/> UTILITIES
<input type="checkbox"/> EDITOR	<input type="checkbox"/> MODELING	<input type="checkbox"/> VM
<input type="checkbox"/> ENTITY STRUCT.	<input type="checkbox"/> PERFORM. & ACCTG	<input type="checkbox"/> OTHER
<input type="checkbox"/> FILE STRUCTURE	<input type="checkbox"/> SECURITY	

Request Title: \_\_\_\_\_

Request Description: \_\_\_\_\_

Request Benefits

Submitted by- \_\_\_\_\_ Company: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Customer ID Number \_\_\_\_\_

Telephone: \_\_\_\_\_

### Instructions for Change/Enhancement Form

1. Place *one* 'X' to the left of a category within *one* product. This indicates which Product this Change/Enhancement is for and what general category the Change/Enhancement belongs. This category groups similar Change/Enhancements together.
2. Enter a Request Title which is a one line description for your Change/Enhancement that is less than 40 characters.
3. Enter a description for your Change/Enhancement. Please be specific when describing your Change/Enhancement.
4. Enter an explanation of the benefits of the Change/Enhancement.
5. Enter information about yourself so someone can contact you if there is some questions about your Change/Enhancement.
6. Mail Form to:  
Mr. Martin Henderson  
Marathon Oil Company  
539 South Main Street  
Findlay, OH 45840 USA



# SOFTWARE AG USERS' GROUP TOOLS REQUEST FORM

## REQUEST

Any licensed user of Software AG products may request a copy of the DBA (for ADABAS & NATURAL) Tools or the COM-LETE Tools.

Complete the information below and send to: Users' Group Liaison, Software AG of North America, Inc.  
11800 Sunrise Valley Drive, Reston, VA 22091 USA

Send:  DBA Tools Tape (for non-DOS users)  DOS DBA Tools Tape (for DOS users)  COM-LETE Tools Tape

Note—Both of the above DBA and DOS DBA Tools tape contain the same set of tools. The only difference is the DOS DBA Tools tape is DOS readable.

Ship to: (Please type or print)

Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ Country \_\_\_\_\_ P.O.# \_\_\_\_\_

Bill To: (A cost of \$15.00 is charged for each of the above tapes that are shipped.)

Send invoice to SHIP TO name above  Send invoice to person below (Please type or print)

Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ Country \_\_\_\_\_ P.O.# \_\_\_\_\_

---

## Change of Address Form

Check One:

- Change of Address (attach old label)
- Add New Name
- Delete Current Name (attach old label)

### U.S. Users Send to:

Users' Group Liaison  
Software AG of North America, Inc.  
11800 Sunrise Valley Drive  
Reston, VA 22091

### Users Outside the U.S. Send to:

Your Software AG Distributor or Affiliate

First Name	<input type="text"/>	Middle Initial	<input type="text"/>	Sur-name	<input type="text"/>
Your Title	<input type="text"/>				
Company Name	<input type="text"/>				
Division	<input type="text"/>				
Street 1	<input type="text"/>				
Street 2	<input type="text"/>				
Street 3	<input type="text"/>				
City	<input type="text"/>	State	<input type="text"/>	Zip	<input type="text"/>
Country	<input type="text"/>				
Tele- phone	<input type="text"/>				

### "Natural"—from page 1

In most cases, NATURAL has been used as an interactive application development system replacing a 3rd generation language such as COBOL. In many instances, increased productivity was the major reason for using NATURAL. Tens of thousands of people have been trained in the usage of NATURAL and thousands of applications have been successfully implemented. These applications themselves represent millions of lines of NATURAL code and span all areas of business. In many installations the NATURAL method of application development has been established as a standard. The usage of NATURAL has resulted in a closer cooperation between the end-user and the application-developer which has in turn provided better applications that meet the company's business needs in the required time frame.

NATURAL has been further developed to increase the functionality and provide even more productive means of application development. These new enhancements have been included in system maintenance levels as well as in new versions. NATURAL has also been expanded over the years to cover a wide range of environments including DEC/VAX and many IBM environments such as DOS, VM/CMS, OS, COM-LETE, CICS, TSO, and IMS/DC. This span of environment support has provided portability of applications and people.

The next major step in the development of NATURAL is Version 2.1. This version will provide major extensions to the functionality of the product and enhanced dictionary support. Also being developed is a syntax checker that will allow a PC to be used as a development workstation. The final goal in the

micro area is to have NATURAL fully operational on the PC. This will enable the PC to be used as a comprehensive development and application workstation. NATURAL is also being extended to allow for integrated text and data processing. These extensions will provide better facilities for the development of integrated office applications using NATURAL.

The development of NATURAL will continue with the goal of pro-

viding and integrating more and more functions that can be used to process information better and better. It will still take years until a 'standard' can be defined that will support the functionality of NATURAL. Although standards for 4th generation technology are desirable, Software AG will continuously push for technically innovative solutions that mark the path for others to follow.

## ANNUAL RESULTS

### Software AG Systems, Inc. Comparative Operating Results (In thousands except per share amounts.)

	Three Months Ended May 31		Fiscal Year Ended May 31	
	1985	1984	1985	1984
Revenues	\$ 14,110	\$ 12,030	\$ 52,264	\$ 41,127
Expenses	12,151	8,367	39,572	30,191
Income Before Income Taxes and Cumulative Effect	\$ 1,959	\$ 3,393	\$ 12,692	\$ 10,935
Cumulative Effect of Change in Accounting for Recognizing Contract Revenue, Net of Tax	\$ --	\$ --	\$ (1,593)	\$ --
Net Income	\$ 990	\$ 1,783	\$ 5,140	\$ 5,856
Income per Share Before Cumulative Effect	\$ .17	\$ .29	\$ 1.12	\$ .95
Net Income per Share	\$ .17	\$ .29	\$ .86	\$ .95
Number of Shares Used to Compute Income per Common Share	5,852	6,157	6,011	6,145
Proforma Amounts Assuming the Change in Accounting is Applied Retroactively:				
Revenue	\$ 14,110	\$ 10,469	\$ 52,264	\$ 39,566
Net Income	\$ 990	\$ 1,066	\$ 6,733	\$ 5,115
Net Income Per Share	\$ .17	\$ .17	\$ 1.12	\$ .83



11800 Sunrise Valley Drive  
Reston, Virginia 22091  
(703) 860-5050

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S. L. ROBINSON & ASSOCIATES, INC.  
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(95021-1)

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Orlando  
Philadelphia  
Pittsburgh  
St. Louis  
San Francisco  
Seattle  
Washington, D.C.

## CORPORATE HEADQUARTERS

### Software AG of North America, Inc.

11800 Sunrise Valley Drive  
Reston, Virginia 22091  
Telephone (703) 860-5050  
Telex 89-9122

### Software AG

Dehmelstrasse 3  
D-6100 Darmstadt  
West Germany  
Telephone (49) 06151-504-0  
Telex (841) 4197104

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