

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

Let's begin by stating what is obvious to data processing professionals: Using fourth-generation language technology means being able to code faster and to develop code of a better quality. And that means that a programmer can be better equipped to tackle the applications backlog that plagues so many data processing departments.

What may not be so obvious is that a fourth-generation language actually gets technology out of the way, and this phenomenon is transforming the entire information processing industry.

No longer is it necessary for a programmer to worry about translating the user's requirements into terms that the old software tools could understand. The programmer can now concentrate more fully on the needs and requirements of the end user.

Along with fourth-generation languages come all the latest software developments in information management: the micro-to-mainframe links like NATURAL/CONNECTION, the menu-driven front-ends like SUPER NATURAL, and the office application solutions like CONNECTION. Products like these put up-to-the-minute corporate data and computing power into the hands of the end users—without these users having to understand how a particular computing function works. Without having to learn a program language, the

INDUSTRY INSIGHTS



Stuart J. Miller
President and CEO
Software AG

end users themselves are free to concentrate on the task at hand—making timely and informed decisions.

So we see that with fourth-generation language systems in place, programmers are better able to focus on end-user applications. And, in turn, end users are able to focus on their actual decision making responsibilities. Both groups, in short, are able to do their jobs better.

With technology "out of the way," data processing professionals and end users are actually moving close together. The programmer becomes in a sense a "systems analyst" and the end users becomes a "programmer".

We have learned many important lessons as we have moved through our short programming history from assembler language, to COBOL, and on to such advanced fourth-generation languages as NATURAL.

Making effective use of computing power no longer requires expertise in the use of the tools themselves—the tools only ease the way to developing information processing solutions. And, the future value of programmers will depend on how well they face the increasing challenge to understand the business decisions that end-users must make on a day-to-day basis. And, the success of organizations will depend on how effectively and efficiently they take on the challenge on managing information.

CUSTOMER SUCCESSSES

BWIA INTERNATIONAL AIRWAYS PRAISES SOFTWARE AG PRODUCTS, SUPPORT

When you're a small airline headquartered on a remote Caribbean island, product reliability and vendor support become major factors in the selection of systems software. Those are just two of the reasons why Software AG of North America, Inc. has been the vendor of choice since 1981 for BWIA International, Trinidad & Tobago's National Carrier.

Like most airlines, BWIA relies heavily on computerized data base systems for everything from passenger reservations to equipment maintenance to management decision making. The difference is that BWIA has brought many of these systems up in a short time, and from a standing start (replacing manual procedures)—with a minimum of on-site assistance.

Using Software AG's ADABAS and NATURAL, BWIA has made a fast, smooth transition to a state-of-the-art DBMS approach. As a result, the company has been able to respond quickly and positively to changes in operating conditions, regulations, and competitive pressures—while simultaneously upgrading its fleet and improving overall financial performance during the period the systems have been in use.

DBMS Systems as strategic tools

According to company spokesman Martin Horsford, BWIA was the first user of ADABAS and NATURAL in the Caribbean. "At

the time we installed the products, there was no one else in the region to look to for guidance or reassurance. And of course, we're not just in the Caribbean, but at the far end of the Caribbean in terms of support from an American vendor. So the decision to go with Software AG took some courage—especially given IBM's strong marketing efforts on behalf of DL1.

"But since we made the decision, we've never had any reason to look back. Product reliability has been excellent, and support has worked out well despite our remote location. Best of all, having these products has helped us turn our information systems into important strategic resources for the company.

"More and more, we're moving towards the development of systems that everyone from the Managing Director on down can use right on their desks. And with lots of PC users scattered in different departments, we're looking at ways to tie them all together so everybody gets the most benefit from the available resources."

"After all, it's the end users who are driving our growth—not just in data processing but throughout the company. If we can help the Managing Director by giving him information in graphic form right away rather than three or four

days later, ultimately it's going to help all of us."

Programmers prefer NATURAL

BWIA's current applications include several bought from outside vendors as well as those developed internally. As a result, says Horsford, the programming workload contains a mix of COBOL and Assembler as well as NATURAL, Software AG's popular fourth-generation language.

"Generally speaking, we've dealt pretty well with this combination. The only problem has been that once programmers learn NATURAL, they don't want to go back to the others. And there's no question, NATURAL does increase programming productivity by a significant margin.

"Another helpful thing about NATURAL is its integration with the other Software AG products. We don't have a big department, so most people have to do many different things.

Having a common syntax makes it a lot easier for people to move from one application to another."

From "pilot" project to user-group pioneer

BWIA's initial ADABAS application involved the conversion of a batch revenue accounting system. Today, many of that system's functions are handled online, including information on schedules, passenger volume by routes and rate classifications, and other regional marketing information.

All told, ADABAS and NATURAL have proved so easy to work with that BWIA now considers the ease of interfacing with ADABAS a top priority in the selection of future application software packages.

Concludes Horsford: "When we started out, we were pioneers. But now we've become a kind of regional elder statesman on behalf of ADABAS and NATURAL. With so many other people now using Software AG products in the Caribbean, it may be time to be pioneers again—by starting our very own regional users' group." □

PRESIDENT'S MESSAGE

*Richard Wolverton
Commercial Union Insurance*

Strategic thinking has consistently been the hallmark of successful endeavors. Business goals and departmental plans are linked by common organizational objectives and must be in line with overall direction. Recently, the company I work for formalized the objectives of its data processing effort with a formal automation strategy. Not surprisingly, the corner stone of this effort was a data base strategy. This recognizes the maturing of data base technology and the emergence of data as an economic resource of the corporation.

It should also come as no surprise to anyone that ADABAS and NATURAL and PREDICT will continue to be the products we use to implement our future system.

The power and stability of these products has been demonstrated for our environment and we are looking toward capitalizing on existing applications, as we provide new automation and information to the business sectors.

The current challenge is to stick with a strategy in the face of constant pressure to change. The number of products that are just right for a specific project but not part of our current repertoire is staggering. We have numerous pockets of expertise in products that are not integrated within our systems. These become isolated and yet the function they provide is valuable. They must be accommodated. The number of ways to integrate PCs with their larger cousins is a megadigit number. Yet without the glue of central data these too are isolated. Because users have had a taste of data processing they have increased sophistication and knowledge and are not content to accept the wisdom of the data processing department without at least suggesting alternative methods of development.

All of this means we must be patient. We must continue to explain why we do things, in addition to seeking better alternatives. In talking to users we must show them how new designs meet their needs and also contribute to strategic unity.

In our own corporations, as well as in the Users' Group, strategic directions and operational objectives are melded into a sometimes cacophonous symphony of ideas. Only with patience, tenacity, and rationality can strategic decisions be orchestrated without discarding innovation and harmony. Participation in the Users' Group lends the support that comes in knowing others are confronting the same issues.

The way to maximize the benefit to yourself and your organization is to become involved. Present a paper at the next Regional meeting on something that will start discussion. Write an article on how these and other issues are being dealt with at your company. Start now to prepare a presentation for the 15th International Software AG Users' Conference. It is by active and open exchange that we help ourselves and each other. □

SOFTWARE AG NAMES NEW SENIOR VP

On August 29, 1985, Vincent R. Grillo, Jr. was elected Senior Vice President of Marketing and Sales, Software AG of North America, Inc. Mr. Grillo reports to Stuart J. Miller, President and Chief Executive Officer.

Mr. Grillo comes to Software AG from Profit Technology Corporation, where he was President and Chief Executive Officer since 1983. For the twenty years prior to 1983, he was Vice President, Senior Marketing Executive for Computer Science Corporation based in El Segundo, California. □

VMS SPECIAL INTEREST GROUP FORMS

*Daniel Nolan
Heuristic Developments*

At the Nashville Users' Conference, the first meeting of Software AG's International Users' Group ADABAS/NATURAL (VMS) Special Interest Group (SIG) for the DEC/VAX line of compact mainframes was formed. After presentations by Dr. Herbert Fischer, Software AG, Darmstadt, and Mr. David Keller, Software AG of North America, Inc., separate meetings totaling over three hours were held. This established that large data base management systems technology could be applied successfully on alternative equipment. IBM users were surprised to find that the VMS Group was ahead in many areas and many were encouraged to gain insight into future releases of ADABAS and NATURAL by visiting their nearest VMS installation.

This SIG formally establishes a framework within the present International Software AG Users' Group that will serve to promote the use of this technology through communication, education and the sharing of experiences.

Several informal resolutions were presented and agreed upon by the participants at the users' conference. These include:

1. Because the experience of relational DBMS lies almost entirely within the IBM ADABAS/NATURAL user community, meetings will be scheduled around this activity. This will allow VMS users to reap the rewards of the past without repeating the errors.
2. Meetings will coincide with local and regional SAGGROUP meetings. Because the technical interests are so diverse in the two environments, Regional Representatives are being urged to arrange their agendas so that both IBM and VMS users can share common interests and yet separate and discuss hardware and system specific topics.
3. Although there are dramatic distinctions between VMS hardware configurations (stand-alone, coupled, etc.) and software applications (engineering, business, etc.), the SIG should not separate further. By keeping together, the VMS group will be able to reinforce their needs and will benefit from an even broader exposure to alternative methods.
4. A DBA Tools tape of unsupported user-generated utilities will be maintained and provided to the members at cost of material. Postpaid packaging and the tape will be included with each request. Contributions and requests (including the Software AG customer ID) should be addressed to:
Dan Nolan,
VMS SIG Chairman
Heuristic Developments
7708 Newcastle Drive
Annandale, Virginia 22003
5. A bulletin board facility will be provided over dialup communications to all VMS users. This will include each users' profile and the ability to communicate on a time-delayed basis. Those wishing to subscribe to this service should phone for details to 703/644-3100 (or 703/642-9333 after hours).
6. The bulletin board and phone calls to me will constitute an Application Trouble Desk. This will allow those who are faced with unfamiliar projects to discuss the work others have done in similar areas.
7. Communications being one of the most important vehicles in our industry, the SIG agreed to emphasize participation and office in local regions. The opportunity to present papers locally as a rehearsal for the next International Software AG Users' Conference should produce no fewer than six presentations in next year's San Diego conference agenda.

Also, papers, contributions and local activities related to VMS products that are presented at SIG meetings will be submitted to Software AG for publication. Dan Nolan set the pace by presenting the decisions that led to Heuristic Developments' decision to move its ADABAS/NATURAL product line and development work onto the VMS products.

After this initial organization, work began in earnest: Mike Schowalter and Dr. Fischer fielded technical discussions from the attendees. Such a wide scope of topics were to be covered, and so intense was the interest that the allotted time was exhausted. A special session was held after the regular session day had ended which allowed all questions, answers and recommendations to be heard and passed on.

The first regional meeting was held in Washington, DC on July 16, 1985 in conjunction with the Eastern Region. Tom Clark, the Regional Representative, agreed to structure the agenda so that items of mutual interest to IBM and VMS users could be heard in the morning. In the afternoon the VMS contingent adjourned to a separate room for their VMS technical session (see article titled, "VMS Special Interest Group Holds First Meeting", under the Regional Reports section of this newsletter). □

SAN DIEGO USERS' CONFERENCE PLANNED

Larry Jayne
Software AG

Can you imagine going to a gathering of your peers and having the opportunity to discuss your questions, express your problems and concerns and then obtaining answers and solutions that will help you back on the job?

Well, this is exactly what is in store for you when you attend the next International Software AG Users' Conference. Themed, "Beyond The Horizon" which is defined as "Farther On than the Limit of One's Experience", this great gathering of all Software AG users is scheduled for May 11-15, 1986 in San Diego, California. This 15th International Software AG Users' Conference will give all users a chance to share their experiences and hear Software AG discuss plans and directions of their current and new products. The focus will be on your needs and pointing the way for the future as you use Software AG's technologically innovative solutions.

Plan now to attend and meet with some of the over 1,400 attendees from around the world. This is your chance, don't pass it up. Register today!!!



Conference Registration

Registration packets with full conference details will be mailed to all U.S. users in December. At the same time, packets will be mailed to each Software AG affiliate and distributor so that they can direct copies to each of their users.

Host Hotel

The Sheraton Harbor Island Hotel in San Diego, California will host the conference where all activities will be held. Room rates are \$85 single or double; optional Tower rooms are available for an additional \$20. This allows conferees to bring a companion at no additional room cost. □

CALL FOR PAPERS

Larry Jayne
Software AG

Software AG and The International Software AG Users' Group (SAGGROUPE) invites its members to submit papers for presentation at the Fifteenth International Software AG Users' Conference to be held in San Diego, California, May 11-15, 1986. The conference provides an environment where users can describe interesting applications of Software AG products, and discuss unique solutions to the problems of their organization. In short, it is an information exchange on aspects of Software AG product implementation and use.

Formal papers may be presented that relate to ADABAS, NATURAL, PREDICT, COMPLETE and related topics of the DB/DC technology. Of particular interest are papers in the following areas:

- Performance monitoring and tuning;
- Application development and file design;
- NATURAL programs - how to manage them and recognize good ones;
- Organizational placement of the DBA and how to manage the function;
- How to deal with the threat to current staff i.e. COBOL programmers;
- Data administration issues, policies, and techniques;
- How to use NATURAL programs not necessarily how do they work;
- End-Users and how they can use Software AG products;
- The ancillary things involved with Software AG products;
- Humorous papers related to the above.

Procedures for Submitting Papers:

1. Abstracts

A one-to-two page abstract or detailed outline is due in Reston, Virginia, January 6, 1986. Software AG and a User Coordinator will review each abstract for general content and may suggest some modifications or unique emphasis in your topic. The major purpose of the review is to ensure greater variety among user presentations. Also, early confirmation of presentation topics will allow the announcement of topics to be presented. The abstracts should be single spaced on 8 ½ inch by 11 inch paper. One-inch margins should be maintained.

2. Acknowledgement of Participation

After review by Software AG and the User Coordinator, Software AG will confirm participation of each contributor by sending a Letter of Abstract Acknowledgement.

3. Due Dates

- Abstracts are due in Reston by January 6, 1986.
- Abstract Acknowledgement letters are scheduled to be sent to each presenter by Software AG by January 27, 1986.
- Papers - in final form - are due in Reston by March 17, 1986.
- Acceptance For Presentation letters are scheduled to be sent to the authors by Software AG by March 31, 1986. This is to confirm that their paper has been accepted for presentation. Early submissions are encouraged and will be gladly accepted.

4. The following guidelines have been established so that all conference attendees may be presented with a complete, readable copy of the Proceedings when they register. Please take special note of these guidelines.

- Each formal paper must be a clear type-written original. It should contain sufficient narrative to present the topic to a reader unable to attend the presentation. Copies of each formal paper will be printed and included in the Conference Proceedings.
- Technical details regarding format and submission of final papers will be sent along with the Letter of Abstract Acknowledgement.

5. Each user presentation is scheduled for thirty minutes which includes a question and answer period. If your presentation requires more than thirty minutes, please contact me as soon as possible so I can determine if additional time is available on the Conference Agenda.



The opportunity to make a formal presentation is a unique one. It is a forum to express your ideas, to talk about how you or your organization solved some general problem, and to discuss your organization's experiences. User experiences enrich other members of the user community. We ask that you share these experiences with us in San Diego.

If you have questions or wish to talk over your ideas for a presentation, please call Larry Jayne in Reston at 703/648-2574.

Your abstract and final paper must be sent to Larry Jayne, Users' Group Liaison, Software AG, 11800 Sunrise Valley Drive, Reston, Virginia 22091. Please remember the deadline and we look forward to receiving your contribution. □

NEW CHANGE/ ENHANCEMENT PROCEDURES

*Martin Henderson
Marathon Oil Company*

There has been some confusion over the modifications the SAGGROUP Executive Committee made to the Change/Enhancement (C/E) process at the Nashville Users' Conference. To clear up the confusion, let me outline the major points for you.

- A. There will be no voting on the C/E's prior to the users' conference each year.
- B. Software AG will provide their responses to the C/E's after every calendar quarter (January, April, July, and October).
- C. In June, the user community will receive a list of all C/E's that were submitted from April of the previous year to March of the current year. They will then vote only on the C/E's that are classified as Future Objective, Under Study, Long Range Consideration, or Rejected. C/E's that are classified as Available, Announced, or Accepted will not be voted on. Your completed ballots should be mailed to the C/E Coordinator by August and the results of the voting to be mailed to the user community in September.

Those are the major changes that have been made to the C/E process. Previously, when a C/E was submitted, it could take up to a year and a half to receive a response from Software AG. This was due to the schedule of events designed into the C/E process. One goal I have had was to reduce that time down to four months (about once a quarter). It is obvious that it is impossible to have the international user community vote and obtain Software AG responses once every four months. The SAGGROUP Executive Committee decided at the 1985 Nashville Users'

Conference that it is more important to receive Software AG responses on a timely basis. The user community will then vote on the C/E's AFTER Software AG has given their responses and AFTER the international users' conference each year. There are two advantages to this new approach:

1. The user community will receive responses to their C/E's every four months;
2. The user community will no longer vote on C/E's that have Software AG responses of Accepted, Announced, or Available. The user community can, therefore, concentrate their votes on the more relevant C/E's.

For the years 1985 through 1986, you should keep the following dates in mind:

1. You should receive a list of C/E's with Software AG responses in the following months - January, April, July, and October;
2. All the C/E's (with Software AG responses) from September 1984 through December 1985 will be included in the 1986 International Software AG Users' Conference Proceedings. Each conference attendee will then have a list of the C/E's to read over and discuss at the conference C/E sessions;
3. In June of 1986, you should receive C/E's to vote on. These C/E's were submitted from September 1984 through December 1985;
4. You must return your voting ballots to the C/E Coordinator by August 15, 1986;
5. You should then receive the voting results in September 1986.

I hope this will clear up the confusion. If you have any questions, please contact me directly.

The new procedures have been implemented for the Change/Enhancement system, but they are a little behind schedule. We are attempting to provide the user community with responses to their Change/Enhancements (C/E's) every calendar quarter. You were supposed to receive the first responses in July 1985. It looks like you will receive those responses late for this quarter. One reason for the delay is the number of Change/Enhancements received so far. The "first quarter" was from September 1984 through June 1985. We had 48 C/E's for COMPLETE, 47 for ADABAS, 12 for PREDICT, and 133 for NATURAL. This is close to the total number of C/E's submitted for the entire year of 1985.

The number of C/E's that I have received since the Users' Conference in Nashville has dramatically dropped. For the months of July through September, I expected to receive about 50 C/E's for all products. I hope to have the initial problems straightened out by the third quarter of 1985.



I will be attending the mid-year meeting of the SAGGROUP Executive Committee in October in Reston. At that time I will be reporting on the progress of the new system and discussing any possible changes or improvements. One improvement that I am considering is the development of a NATURAL/CONNECTION program for entering the initial C/E's. A company could then use their PC for entering C/E's, and once a quarter they could mail me a diskette.

The purpose of the Change/Enhancement System is to provide a mechanism where the Software AG user community can provide information to Software AG on improving their product. This is a very important function and it deserves to be treated seriously. Almost all users of Software AG products will come into contact with the C/E process at one time or another. I have made some changes to the C/E process in order to improve the communication between Software AG and the user community. I have been in this position for almost two years and it is time for someone to take my place as the Change/Enhancement Coordinator at the San Diego Users' Conference next year. If you are interested in the responsibilities of this highly visible position, please contact me. If you have any suggestions to improve the Change/Enhancement Systems, please contact me as well. □

CONFERENCE PROCEEDINGS AVAILABLE

Larry Jayne
Software AG

Copies of the proceedings from the 14th International Software AG Users' Conference are now available. The Proceedings contain papers presented at the recent conference in Nashville. Each copy costs \$50.00 and may be obtained by requesting the 1985 International Software AG Users' Conference Proceedings. Send your orders to:

Software AG of North America, Inc.
Publications Distribution Department
11800 Sunrise Valley Drive
Reston, Virginia 22091 □

CONFERENCE TAPES AVAILABLE

Larry Jayne
Software AG

Audio tapes of the sessions at the recent Nashville Users' Conference are available. An order form has been included in this newsletter for your convenience. Simply complete the form and mail it to Audio Stats as requested on the form and they will send your order in the return mail. □

SOFTWARE AG IN THE NEWS

Following is a list of selected Software AG In The News since June 1985:

DATE	PUBLICATION	TITLE
June'85	Systems User	Software AG Makes Connection
6-17-85	Computerworld	Will The Real 4GL's Please Stand Up
6-17-85	Computerworld	SQL Users Give Mixed Reviews
6-24-85	Info. Week	Giving Credit Where Due
7-8-85	Fortune	DP: Breaking Away At Schwinn
July'85	Com.In Banking	SUPER NATURAL Menus Aid Users In Applications
July'85	Systems User	Software AG Announces NATURAL/CONNECTION V2
7-1-85	Computerworld	Int'l Software Mart Showing High Sales Potential
9-16-85	Computerworld	Blazing Trails the NATURAL Way: Fourth-Generation Tools



VMS SPECIAL INTEREST GROUP HOLDS FIRST MEETING

Daniel Nolan
Heuristic Developments

On July 16, 1985, the VMS Special Interest Group attended as an adjunct to the regular Eastern Region SAGGROUP meeting. The first part of this session, common to both VAX and IBM sites, focused on the topic of performance.

The results of this topic included the "Ten Most Common Problems" and their respective solutions as described by Steve Carter from Data Base Utility Group:

Some additional ideas were presented including:

1. Try to match data access paths with record selection. (Appropriately use FIND, READ LOGICAL, READ PHYSICAL, etc. Use the FIND ... BUT NOT ... to further reduce selections.)
2. Avoid redundant processing loops. (Too often, FINDs nested in other loops get the same record.)
3. Recognize overhead of sequencing. (Alternatives to SORTED are READ LOGICAL and external SORT)
4. Process MU and PE fields appropriately. (Where GET SAME is expensive, OBTAIN and MOVE INDEXED costs less, while direct reference by index number is cheap. OBTAIN when not indexing, however, is wasteful. Implicit ranges, such as ADD #EARNINGS = SALARY (1-12) is good. The value of elaborate code to avoid necessary access is generally questionable.)
5. Structure UPDATE processing logic rationally, so as not to include records and files in an UPDATE that are not changed.
6. Watch the overall program structure to avoid unneeded work that could "linger" from development and experimentation.
7. Use RETAIN sets, both to pass series of records from one program to another, and to reduce the overhead of complex FINDs (but check the *NUMBERS before doing the final FIND).
8. Avoid trying to enforce standards with parameters. (Reducing LS will not encourage use of FIND ...SORTED. Selection is done outside LS, and a tiny LS will increase the number of throwbacks.)
9. Employ object module analysis (such as distributed by the Rocky Mountain Region) or source code standard scanners to intercept problems before production.

During discussion from the floor, some examples of "clear programming" were cited. The premise is that "Bad" code is never intentionally put in a program. It survives by disguise, hiding and camouflage. Programmers either use excessive "Noise Words" or omit them altogether. While too many words can tend to camouflage (and aggravate) too few words will often mislead by hiding:

1. REINPUT WITH TEXT 'Enter Date' MARK FIELD 1 AND SOUND ALARM
... is probably too wordy when compared with:
REINPUT 'Enter Date' ALARM
... and, considering that the users will appreciate a more verbose complete message, you can re-invest the space saved as;
REINPUT 'Effective Date Must Be Year, Month & Day' ALARM
2. FIND ALL RECORDS IN FILE PERSONNEL WITH NAME = 'ADAM' THRU 'ADAM' vs. FIND PERSONNEL WITH NAME = 'ADAM'
3. READ PERSONNEL WITH NAME = 'ADAM'
... gives no indication that it doesn't stop there;
READ PERSONNEL BY NAME STARTING FROM 'ADAM'
... gives a better idea of what is going to happen, while;
READ PERSONNEL BY NAME IN LOGICAL SEQUENCE FROM 'ADAM'
... leaves no doubt whatsoever.
4. READ PERSONNEL WITH SEX = 'M' WHERE NAME = 'ADAM'
... clear as to intent, this combines statements;
READ PERSONNEL WITH SEX = 'M' WHERE NAME = 'ADAM'
... placing separate statements on separate lines makes the meaning clearer and reveals logic.
5. SEX = 'M'
... standing alone, will put the letter 'M' in the field. Let's look at the program:

```
0220 READ PERSONNEL
0230 UPDATE WITH SALARY =
      SALARY (0090)
0240 * IF SEX = ' '
0250     SEX = 'M'
0260 PERFORM WRITE-LIST
```

... and the entire staff of the company is masculated by maintenance. Always use the words ASSIGN or COMPUTE.

6. READ PERSONNEL

OBTAIN SALARY (1-64)

IF SALARY (1) = 0 PERFORM NEW-HIRE
CLOSE LOOP

... will result in an "inexplicable" runtime error if there is insufficient format buffer space to contain all the values along with the rest of the program. At the least, the OBTAIN is wasted since it is never used.

Other asides and comments in the audience stressed the importance of indentation, comments and meaningful field names in programs. Typically, the frustrations of simply getting the program to satisfy the End-Users will prevent developers from reviewing their code with the eye toward efficiency that casual observers might provide, given that they can make it through the verbage.

After a short break, the VMS Special Interest Group met as a separate group to discuss their specific interests. Dan Nolan, Heuristic Developments, began by distributing the DBA Tools tape for VMS users and explained each of the facilities. A point of significance. The DBA Tools do not replace Software AG features, but serve only as Stop-Gap, Standard and Guides. When Software AG incorporates a feature that performs the work that is on the DBA Tools, that feature will be removed from the tape.

Dan also included the single-format "file" or "communications" transfer program he developed to move applications between VAX and IBM. This program, installable on either machine, writes or installs code in a single format. Standardization at this level releases installers from concern over the type of machine involved in producing or installing applications. Tapes cut from one machine can be used on either machine.

VMS users have benefitted from the experience of the IBM contingent in the establishment of the first true DBMS on their compact mainframes. In return, Big Iron people can gain expertise from the VAX users on the coming release of ADABAS V5 and NATURAL V2 for the IBM. □

FAR EAST REGION

Masaki Oshima

Software AG of Far East, Inc.

The general meeting for the Far East Region was held on June 25, 1985 in Tokyo with 109 attendees.

Mr. Amino, a committee member of the Users' Group, gave an address to the participants with an outline of the activities and events in the previous fiscal year, 1984.

Mr. Keiji Ueda of Nissan Motor Co., Ltd. was reelected as President of the Users' Group and also the Software AG Far East Regional Representative. New committee members nominated by the executive committee members met. The activities and the balance of the previous fiscal year were reported. The activity plans for this year were accepted with unanimous approval.

In the former half of the general meeting, Professor Tadanobu Tsunoda of Tokyo Medical and Dental College, gave a speech titled as "The activity of the brain and environment." It was a very interesting speech. □

FAR EAST REGION ASSIGN

Tadaharu Yanai

Taisei Corporation

The 43rd ASSIGN was held in Tokyo on June 25, 1985 with 75 attendees.

I reported on the policy of Software AG which was presented at the recent 14th International Software AG Users' Conference in Nashville and on my impression of the conference. Mr. Ishizaka of Software AG Far East introduced the concept of an integrated approach including Office Automation, called Fourth Generation Information Technology.

Mrs. Yoshiki of Software AG Far East reported on the answers to the annual Change/Enhancement Requests submitted by the Far East users.

Finally, Mr. Shimada of Software AG Far East gave a presentation on ADABAS Version 5.1. □

THE 16TH COM-LETE USERS' GROUP MEETING

Yuzo Fukumoto

Isetan Data Center

The 16th COM-LETE Special Interest Group meeting was held at the Tokyo Norin Nenkin Kaikan after the Far East Region Users' Group meeting of June 25, 1985.

Mr. Suemasu of Software AG Far East reported about the 14th International Users' Conference and Mr. Katada of Tokyo Sanguo Shinkin Bank gave his impressions of the conference.

The theme of study in this fiscal year was discussed and it was decided to continue the study of "Library Management" with all of the members. Further, it was decided that some lectures and other meetings related to the leading technology of data communications would be held.

A new member, Mr. Suzuki of Dentsu Inc. joined the COM-LETE group and introduced himself to the members.

Mr. Furuyama of Software AG Far East gave a presentation on COM-LETE V4.3.1 and Japanese ZEDIT V2.1. □

SOUTH EAST ASIA USERS MEET

*Pearly Lim
Republic of Singapore*

The annual meeting of South East Asia users was held on March 28-29, 1985 at the Institute of Systems Science in Singapore. Sixty-six people from 13 of the 18 South East Asia user organizations attended. In addition, six SPL and Software AG of North America staff were present along with eight users from Hong Kong, Philippines and Malaysia.

Ms Pearly Lim, Ministry of Finance, began the two-day program with a presentation on their first experience in program walkthrough on three NATURAL programs. Allen Leung, Dow Chemical, Hong Kong, followed with an overview of their ADABAS environment. The Ministry of Defense gave two presentations. Lim Khee Meng and Mark Tan talked on the facility they developed to download data from the mainframe to the IBM PC. The attendees were all enlightened on this innovative development process.

On the second day, Lee Kian Joo and Angela Lim talked on their experience in implementing a successful information center environment using ADABAS and NATURAL. The Port of Singapore Authority gave two talks. Ho Shew Ee presented their utility to cross-reference NATURAL programs; Kwan Swee Wah told the group how they document and control the ADABAS command flow in their environment. A facility developed for online job booking under CICS and TSO was presented by Koh Kim Tian of the Ministry of Education. The Institute of Systems Science (ISS) concluded the meeting with two very interesting presentations. Bill Zernik gave a condensed talk on a one-week course on the ISS data design methodology as it applies to ADABAS. This was followed by Por Hau Joo presenting the NATURAL Flowcharting Technique he compiled and developed.

The attendees were treated to a feast of vendor presentations. As SPL had just been appointed as their new representative, Teng Cheng Chong, General Manager of SPL, Singapore, and David Needham, Director of SPL Australia, gave us their view from the vendors stand point. Teng Cheng Chong also gave a briefing on the Training Plan. This was followed by Randy Mangum, Technical Support, Software AG of North America, who briefed the group on the support plan. Mike Dunkerlay, Senior Technical Support Representative of SPL Australia, gave an overview of ADABAS/VTAM and reflective data bases. This was followed by David Needham telling about some interesting Australian users experiences. Mike Gallagher, Product Marketing Manager from Software AG of North America, presented CON-NECT, Software AG's plans for office systems. Mike Dunkerlay concluded the first day's meeting with a talk on five parameters related to ADABAS tuning. On the second day, Mike Gallagher talked on enhancements to existing Software AG products, future directions of Software AG and demonstrated SUPER NATURAL.

The consensus of the attendees found the meeting to be very worthwhile. The National Computer Board and SPL were thanked for their sponsorship of the meeting. □

NORTHWEST REGION

*Steve Bradley
Weyerhaeuser Company*

The major topic of the September 6 meeting was Dictionary Development and Usage.

The first presentation was by Alan Shue, Manus Professional Services. Alan discussed data dictionary concepts with the main emphasis being that information is and should be a managed resource within any company. He discussed the concepts of metadata (data in the dictionary about your corporate data), types of metadata that might be kept (hardware, application software, operating software, digital data, and hardcopy data), dictionary configuration modes (passive, active, inline), and metadata models.



Dean Sales, Software AG SSR Manager, presenting PREDICT V2.



Dictionary Workshop panel members (l to r.) Bill Anderson, State of Washington, Dept. of Labor, Mike Stein, Washington State Data Processing Service Center #1, Steve Baker, Multnomah County Oregon, and Debby Lawson, Washington State University, giving her presentation.

Alan characterized part of his presentation as being "where the rubber meets the sky". Some of it did appear to be out in the future, but maybe not as far as one might think. Some of it is here now.

Dean Sales, Software AG, Mountain View was up next with a presentation on PREDICT 2 and its new features and functions. Cathy Lonsdale followed with some tidbits about current and new releases and training. She asked each site present to fill out a Customer Profile form so that we would have the latest information about each customer site and contacts.

Larry Jayne, Users' Group Liaison, Software AG, talked about the newsletter, gave an update about the last users' conference and the plans underway for the next conference. He discussed the changes to the Change/Enhancement procedure and reviewed the list of consultants which is available to each user.

Next was a panel of users who discussed various dictionary environments found among the Northwest SAGGROUP members.

Steve Baker, Multnomah County, started off by telling about his shop's use of PREDICT. They use it for file definitions and for NATURAL DDMs. Steve seemed happy with their use of PREDICT and encouraged others to get PREDICT off the shelf and into use.

Mike Stein represented Washington Data Processing Service Center #1 serving several state agencies. Each agency has a DBA for their database(s). The service center has Datamanager and the old Software AG dictionary. They also have PREDICT, and are bringing it up. Mike said they recognize there will likely be a need to support multiple dictionaries and build bridges between them.

Bill Anderson, Washington Department of Labor and Industries, described experiences with home-grown dictionaries. Bill had worked with the home-grown variety at a previous employer.

Debby Lawson, Washington State University, described their experiences with four different dictionary packages over several years.



Steve Baker, Multnomah County Oregon, discussing their use of data dictionaries.

The panel provoked considerable discussion including questions and comments from the audience. From the discussion, it seems that PREDICT is being successfully used for maintaining ADABAS file definitions and NATURAL DDMs. Very few shops are using any dictionary for much beyond file definitions and DDMs. And some shops are not using any dictionary at all.

Mike Gilliam, Software AG, Denver, followed the panel discussions with a review of some technical hints that he had picked up during his work in the Denver Customer Support Center. □

PACIFIC SOUTHWEST REGION

Gary Hart
CCH Computax

The July 26 meeting was hosted by CCH Computax in El Segundo, California. Mark Ambrose, Ticor Mortgage, received a letter from Lope Auxillos of the Asian Development Bank in the Philippines offering to share a group of his NATURAL utilities. The "Kendrick Utilities", as he calls them, include material from Lope's two presentations at the last two International Software AG Users' Conferences, a NATURAL object editor, and many other NATURAL utilities. Gary Hart, CCH Computax, said he will order the tape and will make it available to other local users.

Gary Hart talked about the creation of a local user's group profile. Member information sheets were distributed to those in attendance.

The meeting concluded with an on-line demonstration by Gary Hart, on some DBA tools that use the ADAREP reports. Information is generated on added extents, blocks used, file growth and more. □

ROCKY MOUNTAIN WEST REGION

Gordon Wood
Utah Retirement Systems

The first meeting of the newly formed Rocky Mountain West Region was held on July 12, 1985 at the Utah Retirement Systems office in Salt Lake City, Utah. This region was formerly part of the Rocky Mountain Region which was split into two regions, the Rocky Mountain West and the Rocky Mountain East.



Kent Linsenman, EG & G Idaho presenting "From 'Homegrown' to PREDICT".



Mike Ater, Vice President, Customer Service, Software AG, discussing customer service.



Some of the attendees at the Rocky Mountain West meeting.

The first presentation was prepared by Art Daniels and presented by Kent Linsenman of EG & G Idaho, Inc. This presentation was titled, "From 'Homegrown' To PREDICT Utilizing User Exits." EG & G had developed a quite extensive online data dictionary system prior to the release of PREDICT. This presentation dealt with how they have used PREDICT's user exits to give PREDICT some of the additional functionality that they had come to rely on for dictionary integrity and interface capability under their "homegrown" system. Kent stated that the major advantage of PREDICT over their own system was the migration facility for dictionary elements between data bases. This and the necessity to stay compatible with future releases of Software AG products were the primary reasons for converting from their "homegrown" system to PREDICT.

Mike Ater, Vice President of Customer Service, Software AG, followed with a discussion on Customer Service, Policies and Directions, previous service, current service, and what Software AG is striving for in these areas.

After a short break, Mary Muldoon from Software AG gave an excellent slide presentation on PREDICT V2 and NATURAL CONNECTION V2. Mary demonstrated the new features and answered questions regarding the two products.

Janie Gilbert of EG & G Idaho, concluded the meeting with a presentation titled, "System Architecture - A Common Architecture For Integrated Business Systems." Systems Architecture is an umbrella software application developed and used by EG & G Idaho to integrate various business systems at a processing system level. Similar automated functions, such as, data validation, error handling, etc. are performed by the System Architecture in conjunction with the application program rather than each application performing this work itself. The objective of System Architecture was that to any online business system end user, the applications were to look the same, act the same and report the same. It also made it easier for programmers to move from one application group to another, because they were all utilizing the same architecture. □

SOUTHEASTERN REGION

*Ralph Kindred
R. J. Reynolds*

The September 11, 1985 meeting began with the election of new officers. Ralph Kindred from R. J. Reynolds was elected Regional Representative. Jim Obenschain from the Environmental Protection Agency was elected Regional Vice President and Clayton Clendinen from Orlando Utilities Commission was elected Regional Secretary. Next, Larry Jayne, Software AG Users' Group Liaison, let us know about changes and plans in the Software AG Users' Group and about next years international users' conference planned in San Diego.

John Osteen a consultant with Database Design & Management presented the topic Database Administration and the Data Dictionary Function, and used PREDICT as the data dictionary in his discussion.

Doug Martin from Price Waterhouse gave a presentation on Resource Management in an End User Environment. His discussion included the topics of access management, performance management and capacity planning.

Dennis Gandy of Software AG talked about CON-NECT, one of Software AG's newest products. □

SOUTHWEST REGION

*Mike Jones
Telex Computer Products, Inc.*

The September 13 meeting began with a review of the proposed by-laws for the region. They were approved as proposed. The regular round-table discussion followed with each attendee mentioning his name and organization. Also, each attendee was encouraged to ask the group a technical question related to Software AG products to which he hoped to obtain a solution while at the meeting. This has been used very successfully by the region as a method of sharing questions and concerns with the group and obtaining answers. Each attendee is limited to one minute so that everyone has a chance to express their question.

Following the round-table, Jim Thomann of Software AG's Educational Services Department discussed PREDICT Vers. 2 and its new features and functions.

James Kendrick, Arthur Young, gave an overview of a new technology called CAD/CAP being developed by Arthur Young in consultation with James Martin. The technology includes both PC and mainframe facilities to be used for computer assisted application design and development.

A discussion of educational services provided by DELTAK followed. Phil Arcker described the currently available ADABAS audio visual course and the soon to be available NATURAL CBT course. □

ADABAS PRODUCT REP'S REPORT

A. C. Roda
 Planning Research Corporation

The big news in the ADABAS product area of course is the impending release of Version 5.1. Consequently, until users start installing the product and exercising the new features and options, there isn't much to say about Version 4.1; at least no one has sent me anything. It is a solid, mature, and proven product which has served us well. But it is definitely delivery time for Version 5.

I'd like a little feedback from non-NATURAL (unnatural?) users regarding Software AG's decision to no longer distribute and support ADASCRIP+. I agree that NATURAL is definitely the way to go, but there may be cases where its use or purchase is a bit of overkill and hard to justify. There are users and potential users of ADABAS who only need, and in my opinion deserve, to have available to them, a DBMS with a simple no extra cost query language. Will Version 5 support Version 4 ADASCRIP+ applications? I'll be looking into that and will report back what I find, in the next newsletter.

As a reminder, if you're converting to MVS/XA, don't forget to obtain a new SVC from Software AG. □

TUNING ADABAS IN THE CICS ENVIRONMENT

Edward Barrow
 Software AG

ADABAS performance in an online CICS environment first assumes that ADABAS is tuned well. That is to say that standard performance and tuning is done on the database with reasonable frequency in accordance with the Software AG "Performance and Tuning" class. Examples of this kind of tuning include: limited (if any) throwbacks or RSPO88's; less than 1% of all calls going through the last thread; the buffer efficiency (logical io vs. physical io) should be as high as possible; reduction in the number of interrupts; etc. (see "Performance and Tuning", Sue Karlin, 1983 International User's Conference.)

If DSTATS at the end of the day show that ADABAS is running efficiently and yet response time for online users is still unreasonably long, then the interplay of CICS and ADABAS should be considered.

In general we recommend at the outset that ADABAS run in a operating system priority that is at least equal to if not greater than the priority of the TP monitor.

The following information is specific to CICS:

- 1) NT (from ADABAS) should be approximately equal to CMXT (from CICS)
- 2) NC (from ADABAS) should be greater than CMXT (from CICS) to account for batch processing against the nucleus also. If multiple CICS regions are processing against the same ADABAS nucleus then NC must be increased to account for the number of commands from each CICS region. Therefore:

$$NC \Rightarrow CMXT(R1) + CMXT(R2) + CMXT(R3) + \dots + CMXT(Rn) + BATCH$$
 where R1, R2, R3, ..., Rn are CICS regions
 BATCH is the number of ADABAS calls from batch processing
- 3) CMXT should be approximately equal to AMXT (from CICS SIT)
- 4) AMXT + N should be approximately equal to MXT (from CICS SIT) where N is a variable number of other NON-ADABAS tasks that CICS should perform.
- 5) TRNPRTY in CICS PCT for ADABAS can be set to favor ADABAS. The 'transaction processing priority' in CICS is the sum of TRNPRTY, the 'terminal priority' and the 'operator priority' (TRMPRTY and OPPRTY respectively).
- 6) The user can also manipulate the NUBS within ADALNC. NUBS is the number of user buffers that ADALNC can allocate from CICS. It is roughly equivalent to NC within ADABAS; therefore NC should be approximately equal to NUBS + M where M is a variable number of batch commands going against the ADABAS nucleus in addition to the online activity. This also implies that $NC \Rightarrow NUBS$ since online use could dominate the nucleus to the extent that batch activity would see RSPO88s and high throwbacks.
- 7) The PPT entry for ADABAS should be near the top of the table entries for CICS. This will decrease the scan length during the PPT table locate by CICS. This table is searched each time an ADABAS call is made from a user in CICS. Please note: this is no longer true with versions of CICS after 1.6.1. IBM has changed the search algorithm to accommodate the most frequently used programs in the PPT.

The main theme in tuning the interaction between CICS and ADABAS is to let each piece of software do what it does best. CICS is far better equipped to handle the dispatching of tasks within the TP environment; allow it to 'pre-select' the ADABAS users as opposed to forcing ADABAS to undertake the constant monitoring of incoming commands. However, once the user's request has passed through the hierarchy of queues to reach ADABAS, ADABAS must have the resources available to it to fulfill the request. □



ADABAS SPECIAL INTEREST GROUP CHAIRPERSONS

ADABAS/VM

Mr. Dave Durbin
NASA, Ames Research Center
Moffat Field, CA 94035
(415) 694-6444

ADABOMP

Mr. Marc Weyl
Hughes Aircraft Company
2000 East Imperial Highway
Los Angeles, CA 90009
(213) 615-7334

DBA TOOLS

Mr. Galen Hansen
State of Alaska
Anchorage Data Center
3300 Fairbanks Street
Anchorage, AK 99503
(907) 263-6706

DOS

Mr. Orrin Adler
Jewish Federation of Metropolitan Chicago
One South Franklin Street
Chicago, IL
(312) 346-6700, EX. 7739

Education/Documentation

Mr. Michael Miller
Rochester Gas and Electric
89 East Avenue
Rochester, NY 14604
(716) 546-2700

Large Data Bases

Mr. Eric Seifert
Citibank
Consumer Banking, Travel and
Entertainment Group
2 Huntington Quadrangle
Third Floor
Mellville, NY 11746
(516) 752-3202

Performance

Mr. Bob Becker
Foremost Insurance Company
P.O. Box 2450
5800 Foremost Drive, S.E.
Grand Rapids, MI 49501
(616) 942-3364

PREDICT/Data Dictionary

Mr. Thomas Bradbury
HAY Associates
Computer Services
229 South 18th Street
Philadelphia, PA 19103
(215) 875-2718

Scientific/Engineering

Mr. Thomas Galloway
Pratt & Whitney Aircraft
P.O. Box 2691
West Palm Beach, FL 33402
(305) 840-2860

VMS PRODUCTS

Mr. Daniel Nolan
Heuristic Developments
7708 Newcastle Drive
Annandale, VA 22003
(703) 642-9333

KENDRICK UTILITIES

*Lope Auxillos
Asian Development Bank*

I have given presentations at the last two International Software AG Users' Conferences ("Keeping NATURAL Secure", at the 1984 conference in Los Angeles, and "Graphics the NATURAL Way" at the 1985 conference in Nashville). Since then, I have talked to a lot of people and have received lots of comments as well as exchanged many ideas. As a sort of gratitude to all of my friends in the ADABAS/NATURAL circle, I am offering for free some of my most treasured utilities.

I have called them the "Kendrick Utilities" in honor of my partner in the Data Base Administration, Mr. Kendrick Ong, the guy with a special gift for cracking software and automating DBA utilities.

Just to mention a few, the utilities include a "switch" feature which allows you to go around all the NATURAL system files in your data base without having to "FIN" and get into another system file. All the source NATURAL programs of the Simple Security System we have developed are included and they are now in much better shape since when they first came out in 1984. We also have new NATURAL editor features like Calculator and Notepad which will pop out on top of your program (with your program still intact). They generally have these features on the PC, but now, you can have them on the mainframe. In addition, you can also execute NATURAL commands, programs, and modules from within the editor. Also included is a very much enhanced VERIFY utility. After much thinking, we have decided to release our prized NATURAL Object Editor, which has been requested by numerous installations. Some short documentation is included for all these utilities so you can familiarize yourself easily with their workings. There are no installations, no zaps or gimmicks, just plain unconventional programming. Kendrick Utilities will run under NATURAL V1.2 SM3 to SM6.

As the cost of sending tapes from Manila, Philippines is expensive (and we are also not that rich), we have initially sent the tape to Mr. Thomas R. Bradbury, The HAY Group, 229 S. 18th Street, Rittenhouse Square, Philadelphia, PA 19103, USA, phone: 215/875-2300. All those who are interested should contact him directly.

Above all, we would like to hear from you. Please send us a note as we would like to keep a directory for future contacts. We may be contacted by writing to:

Lope Auxillos
Asian Development Bank
2330 Roxas Boulevard
P.O. BOX 789
Metro Manila, Philippines 2800

This superb software, which is not copyrighted and is ever free, will take you to the heights. □

TECHNIQUE OF THE QUARTER

*Ted Venema
Software AG of Canada*

On occasion, especially if you are working with code generation, it is useful to get a B type variable into an N type variable in such a manner that the two variables print the same way. For example, if #BVAR(B2) = H '0120' and you assign #NVAR(N4) = #BVAR, then writing #NVAR will yield 288 which is the decimal equivalent of #BVAR. But, what if you wish to have #NVAR yield 120 so that it can be used in places where B type variables are not allowed such as the COMPRESS statement. If you are generating code that contains refer-backs to NATURAL line numbers then this type of thing occurs since NATURAL line numbers are not really 10, 20, 30 etc., but 16, 32, 64 printed in their hexadecimal format. The following short piece of code does this nicely, thanks to Mr. Gene Miklovich of Software AG of Canada.

```
0010  RESET #PACK(P5): REDEFINE #PACK (#PACK-LINE(B2))
0020  RESET #NVAR(N4) #BVAR(B2)
0030  REDEFINE #NVAR(#AVAR(A4))
0040  #BVAR = H'0120'
0050  #PACK-LINE = #BVAR /* overlay onto packed field,
0060  #PACK = #PACK / 10 /* shift right 1 position
0070  #NVAR = #PACK /* and unpack
0080  WRITE #BVAR #NVAR #AVAR
```

The WRITE statement in line 0080 will write the same value for all three variables with #AVAR yielding the exact character string.

TUNING NATURAL IN THE CICS ENVIRONMENT

Edward Barrow
Software AG

Certain procedures can be followed to increase the performance of NATURAL in the CICS environment beyond the tuning of ADABAS.

- 1) For pseudo-conversational users, the CISIZE parm should be as large as possible, up to a full track, for the VSAM auxiliary temp storage data set.
- 2) With the advent of NATURAL V1.2 (sm06) the NATURAL Buffer Pool Manager was introduced. Proper use of this NATURAL feature will insure that frequently used NATURAL programs, will stay in core thus dramatically reducing calls to ADABAS to load NATURAL modules. Information pertaining to and explaining the NATURAL Buffer Pool Manager can be found in the NATURAL SM06 Documentation:
- 3) If the NATURAL Buffer Pool Manager is not installed, then use of the NATPARM 'NSTATIC' will provide performance benefits. By using the parameter NSTATIC a NATURAL program can be unloaded from the NATURAL system file to a OS PDS or (DOS RELO library) to be subsequently linked to the NATURAL load library (or DOS RELO library) and finally INCLUDED in the relink of the online NATURAL load module (DOS phase). NSTATIC can also be used with the NATURAL Buffer Pool Manager but the increase in performance would be minimal although the NSTATIC link should always be considered for applications that must run or are always in use.
- 4) Manipulation of the TRNPRTY parameter of the NATURAL transaction can also increase performance. If CICS gives higher priority (TRNPRTY) to this transaction, then obviously NATURAL users will benefit.
- 5) Although 'vanilla' NATURAL is not directly influenced by the value of OSCORE (defined in the DFHSIT macro at CICS sysgen), this parameter setting is important as a tuning device within CICS. This parameter controls the amount of dynamic allocation area in the CICS region dedicated to needs of the operating system (specifically, the IO macros: OPEN and CLOSE) after CICS is initialized. If OSCORE is set too high, then when a pseudo-conversational NATURAL user tries to resume his session there may not be enough room in the CICS subpool to re-acquire the users' storage. This will cause a wait, or hang condition for the user until the space is freed up by another CICS task.

The emphasis here is that there must be enough subpool to accommodate the maximum CICS tasks if they happen to be all NATURAL pseudo-conversational users. If at any point in a pseudo session initialization, there isn't enough subpool to initialize, the user will get a NAT9997, not a hang or wait.

- 6) NATURAL also provides for the use of multiple NATPARM and NTSYS modules. CICS resource contention can be reduced by using alternate modules for specific tasks: e.g. if a group of users is never to be writing programs, then a large ESIZE is unnecessary. By decreasing the values for ESIZE (which contains the NATURAL source code during the editing and compiling) and FSIZE (which contains the global variable area and online sort areas at execution time) less data will be written to VSAM temp storage and less CICS subpool will be required to meet the users' request. An alternate NTSYS might be created which increases the ESIZE and FSIZE values for the programming staff.

This utilization of NTSYS and NATPARM can be especially useful in releases after SM06. At that point NATURAL began doing a 'compressed roll': attempting to place all used storage areas in a single Control Interval. If the storage areas are smaller, then the likelihood of compressing them all into a single Control Interval (and therefore a single IO) is increased.

In the sample NATPARM module that Software AG sends out to all users, there is an example of the standard NATPARM module as well as the NTSYS module 'A'. More confirmation on the creation of the NTSYS and NATPARM modules can be found in the NATURAL INSTALLATION manual (pg. 49 for the OS user and on page 59 for the DOS user).

- 7) Because NATURAL depends heavily upon the data base, correct NATURAL system file placement within ADABAS can also play a key role in improving performance. Along these lines, splitting NATURAL system information into multiple ADABAS files can increase performance by decreasing file contention. With releases after sm05, users are allowed to save dictionary data on one file (FDIC) and NATURAL system programs on another file (FNAT). Furthermore, user programs for each department can be split apart by implementing multiple FUSER files and NTSYS modules for each of the departments. This file separation allows for greater flexibility in the data base design for optimal utilization by a NATURAL system.

With this idea of data separation in mind, other ADABAS specific tuning ideas can be implemented. Since FNAT will contain only non-updatable system programs for NATURAL, it can be created with minimum padding factors for Associator and Data Storage. The same would be true for a FUSER in the production environment; programs in that file will probably not be changing but will be migrated to production from a test or development system. The production FUSER however will be a heavily used file and should therefore be placed in the data base to reflect this. A development FUSER should have a greater padding factor (the length of programs will change frequently) and file placement within the data base has less importance since fewer users will be accessing it.

Channel contention can be reduced (if each file resides on packs that are separated by channels); head movement is also reduced since the size of the sub-files is substantially less than the original system file.

- 8) The PPT and PCT entries for NATURAL should be near the top of the CICS table entries. This will decrease the scan length during the PPT and PCT locates. This scan is done every time that the <enter> key is hit in a pseudo-conversational session. Please note: this is no longer true with versions of CICS after 1.6.1. IBM has changes the search algorithm to accommodate the most frequently used programs in the PPT.

NATURAL/CONNECTION VER. 2 UPDATE

*Wes Jenkins
Congressional Budget Office*

I have been testing version 2 of NATURAL/CONNECTION since August. The microcomputer software has been totally rewritten and offers many dramatic improvement over the first version of NATURAL/CONNECTION. I have written a paper that documents our experience with the new version and discusses how we plan to use it at the Congressional Budget Office. If you are interested in a copy of this paper, let me know your address and I will get one out to you as soon as possible.

NATURAL Special Interest Group Chairpersons

NATURAL MICRO Mainframe Link

Mr. Wes Jenkins
Congressional Budget Office
2nd & D Street, S.W.
Washington, DC 20515
(202) 226-2812

NATURAL Security

Mr. Orville Mason
R. J. Reynolds Tobacco Company
Information Resources
401 North Main Street
Winston-Salem, NC 27102
(919) 777-4576

NATURAL Tips & Techniques

Mr. James T. Wisdom
Boston University
881 Commonwealth Avenue
3rd Floor
Boston, MA 02215
(617) 353-2280

VMS PRODUCTS

Mr. Daniel Nolan
Heuristic Developments
7708 Newcastle Drive
Annandale, VA 22003
(703) 642-9333

COM-PLETE PRODUCT REP'S REPORT

*Ron G. Hoover
Pennsylvania State University*

I would like to take this opportunity to thank everyone who supported me during the recent election. It is my intention to represent COM-PLETE users to the best of my ability. To accomplish this, I need to be aware of your interests and needs. From reading past newsletters, it appears product rep's have had difficulty soliciting information from users. I would hope this is not the case with COM-PLETE users. Please take time to drop me a line or call on the phone to let me know your interests and concerns. My mailing address and phone number are listed under the Executive Committee section of this newsletter. I am particularly interested in hearing about your experiences with the roll staging buffer. What have you tried that works and what has not? We have not been very successful with roll staging at Penn State because our threads are large, requiring a large buffer and causing increased paging.

Another area of interest is the NATURAL buffer pool facility. This facility has resulted in a 15 to 20 percent decrease in activity to our NATURAL systems file but at the expense of 1150K worth of buffer in COM-PLETE.

I look forward to hearing about your successes and failures with COM-PLETE. I will share your experiences with the user community and Software AG.

COM-PLETE Special Interest Group Chairpersons

COM-PLETE Performance and Tuning

Mr. John Kaye
Formost Insurance Company
5800 Formost Dr., S. E.
Grand Rapids, MI 49501
(616) 942-3364

COM-PLETE Technical Support

Mr. Jim Lee
CCH Computax, Inc.
P.O. Box 92938
Worldway Postal Center
Los Angeles, CA 90009
(213) 640-3270

COM-PLETE Tools

Mr. Ed Simon
Management Applied Program
6420 Wilshire Blvd.
Los Angeles, CA 90048
(213) 658-7220

