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SERVICES
BUSINESS
DIVISION

ROCKVILLE,
MARYLAND

Feb. 3, 1975
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Breese Named Division Counsel

Vice President and Division General Manager George Feeney has announced the appointment of Claude R. Breese as Division Counsel. Gene Baker, Division Counsel since 1969, has accepted a position as Division Counsel of the Switchgear Division.

"Cap" Breese brings exceptional credentials to Information Services. He has been with General Electric since 1960, most recently as Counsel to the Industrial Sales Division in Schenectady. During his years with GE he has held similar positions with several Divisions and Departments, including the Information Systems Equipment Division from 1968-1970.

Mr. Breese's appointment with Information Services is effective February 3.



Claude R. Breese

New Branch, Zone Managers Named

Jim Castle's early 1975 announcement of Sales Department organization included several promotions in the field sales force:

Bruce Frisch as Northeast Zone manager, and branch managers Charles Benton in Philadelphia, Bill Doubek in Minneapolis, Bill Hohenstein in Boston, and Mike Schermer in Chicago.

Bruce Frisch, Northeast zone manager, was employed by International Harvester and Feed Control Corporation in sales before coming to Information Services in 1969 as a marketing representative in Des Plaines, Ill. He has remained in the Chicago area as account rep and account manager, until being named Chicago branch manager in 1973. Jim Castle, Sales Department General Manager, says Bruce has "demonstrated as a branch manager that he has a well planned approach to sales, which produces results and promises even greater success in his new position."

Charles Benton came to Information Services after twelve years' experience with computers in Burroughs, National Broadcasting, Control Data Institute, (Continued on page 2.)



Bruce Frisch



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Charles Benton



Bill Doubek



Bill Hohenstein

and several data processing service bureaus, including his own business in Columbus. Charles came to Information Services in 1972 as an account rep in Columbus, and transferred to his native California in 1973 where he was a business development rep in Los Angeles before his promotion to manager of the Philadelphia branch.

Bill Doubek joined Information Services in Milwaukee as an account rep in 1972, after three years as a programmer and sales engineer for firms in Milwaukee. Bill is now manager of the Minneapolis branch.

Bill Hohenstein, now manager of the Boston branch, has held positions in the Boston branch since 1969 as sales rep, marketing rep, and senior account rep, before being named account manager there in 1972.

Mike Schermer, Chicago branch manager, has been with GE since 1964. He held positions as technical marketing trainee, programmer/analyst and applications engineer in the Process Computer Department until 1967. Mike then joined this division as a sales rep in Phoenix and was later named manager of the New Mexico branch. Most recently he was manager of the Dallas branch, the outstanding branch for the fourth quarter of 1974, before being named manager of the Chicago branch on February 1.



Mike Schermer

BG's ASTRA for Resource Allocation

ASTRA, a multi-project resource allocation program now available on Background, should be of vital interest to companies where resource allocation tradeoffs against varying project priorities, schedules and costs are important. It is designed to simultaneously handle the integrated time, resource and dollar scheduling requirements of up to 50 large projects. ASTRA uses the network planning technique as a base (PERT or CPM). ASTRA provides an improvement over existing Foreground programs (e.g., CPM, REAL, BIGREAL, GEREAL) in the size of networks handled, report flexibility and operating costs. ASTRA also provides stand alone PERT/CPM processing, comparable to the existing Background PERT TIME program.

Candidates for ASTRA's management science techniques are unlimited in these days of tight budgets: construction, research, new product development, maintenance, education. One of our large ASTRA users indicates a typical run costs anywhere from \$50 to \$500 — a very economical application, according to the customer, for the processing that is being done.

ASTRA documentation consists of the Resource Allocation Program User's Guide (publication 5602.40) and Sample Resource Allocation Problem user's guide (5602.41), reprinted from Honeywell's manuals DB55 and DB34. These user's guides may be obtained by calling Don Farrell in Documentation, 8*273-4749.

Ron Lehrer, headquarters contact for ASTRA (8*273-4227) can compare its value with alternative program management techniques in our market basket. Some sample problems have been loaded in the *** library, and Ron can assist in developing a demonstration strategy.

CRISP III/70 Service Training Continues

The most recent technical training class in the use of CRISP III/70 Service included technical reps from pilot sales areas Chicago and Houston, Don Gable (Chicago), Ray Grybowski (Schenectady), Diane Johnson (Dallas), and Glenda Roberts (Houston), and headquarters representatives who will support the new service.

The training course used video-assisted instruction, with lectures and discussion by headquarters staff knowledgeable in this new offering.

Glenda Roberts described the class as "one of the best-structured courses I have attended — the change of pace from television to live speakers, technical discussion to lecture, kept us on our toes and made it a good course." Dick Herrin of Medinet felt "the technical background evident in the class members made the questions and discussions particularly valuable to all of us."

Dave Votta, project manager for IBM training, plans more technical classes and sales classes during 1975, as CRISP III/70 service is introduced throughout the country.

Others who attended the classes in Chicago and Rockville were Myrl Peterson, Jere Moorman, from Houston; Pete Curtin of Dallas; Karla Yale, Steve Cook, Lee Shaffer, Alex Schwartz, and Lowell Maitland of Chicago; Bruce Barnard and Jennie Munder of the Central Zone; Al Weiss of St. Louis; Jochen Woite of Honeywell, Germany; and from headquarters: Bill Backer of Product Programs; Manny Roberts and Mike Yourtee of Product Support; Walt Cotton, George Cooper, and Janice Dove of Customer Assistance; Ralph Specht of Technology; Dick Herrin of Medinet Strategic Planning; and Dave Besco of Systems.



Dave Votta

Concentrating on a lecture by Harry Hearn in Chicago on the CRISP III/70 service are, left to right: Al Weiss, Steve Cook, Alex Schwartz, Myrl Peterson and Jennie Munder.



The following week, in Rockville, another class asked questions (left to right): Dave Besco, Glenda Roberts, Ralph Specht, Ray Grybowski, Diane Johnson, Dick Herrin, Walt Cotton, and Mike Yourtee.

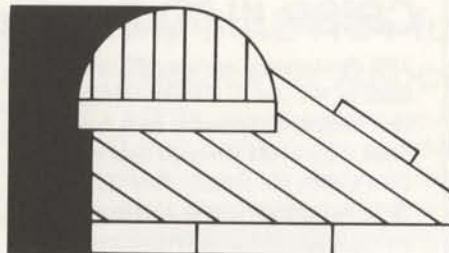


Bus Adapter to Replace FG/BG Bridge

You have probably heard that the bus adapter is replacing the DSU-270 bridge as the link between Foreground and Background. There are several good reasons for making this upgrade. Just as we upgraded from 600s to 6000s, we now go from the bridge to the bus adapter.

With bridge technology, a single bridge served one FG system and one BG system. With the bus adapter, a single bus adapter can serve multiple FG systems and multiple BG systems. In the near future bus adapter software

will be modified so that the user can specify which BG system his job should go to (Honeywell or IBM). Files were actually resident on the bridge while waiting for the appropriate system to pull them. The bus adapter serves only as a switch, allowing direct transfer with no intermediate stops. The bus adapter also offers what we believe is the state of the art technology for inter-systems data transfer and is expected to be more reliable and more flexible than the DSU-270. Deployment of the bus adapter is expected to be completed during February.



COM Can Ease Paper Shortage

COM, Computer Output Microfilm, is one more way to build background revenue — a background tape is converted to microfiche or microfilm by a Kodak KOM-80 unit in the Ohio Supercenter. Both Medinet and the Philadelphia remote operation are substantial customers. Among the advantages offered by COM is the reduction in paper required.

To put COM into a commercial field test, Product Programs would like to learn of commercial users — preferably existing background users and existing COM users, but any interested customer will be considered. Turn-around should not be critical (output is mailed from the Supercenter), and minimum output should be approximately 1000 pages, since there is a \$20 minimum charge for COM use.

For more information, call Fred Wood, 8*273-4624.

Discontinued Documents

The following documents have recently been discontinued:

- 5403.03 Solution of Differential Equations (SOLVD\$***)
- 5404.02 Matrix Subroutine Operations (MATRX\$*** and its subroutines)
- 5501.04 Least Cost Feed Analysis (FEEDMIX***)
- 5501.05 Constrained Optimization (CONOPS)

All were "limited support" documents supporting Class C applications. The applications have 2-17 users/month, not warranting further reprinting and warehousing of the documentation. References to the programs and documents will be deleted in the next re-

visions of the Software Library Index and Publications Price List. However, the programs and subroutines involved will remain on line to serve current users.

Frequently, a question arises as to why programs and routines are on line without documentation. Discontinuation of these documents and their accompanying promotion, while leaving the software on line for current users, illustrates how this situation sometimes arises.

Discontinued publications are so noted in the Market File Index, publication 1.09, issued approximately quarterly. Significant cases will be announced in UPDATE.

January Service Awards

20 YEARS

Lois J. Valentine . . . Rockville

15 YEARS

Evelyn H. Geiger . . . Rockville

10 YEARS

Allen U. Nuss . . . Cleveland

Shirley A. Gilleland . . . San Francisco

5 YEARS

Joseph I. Ripkin . . . Hollywood

Sambamurty Arisetty . . . New York

Charles A. Bledsoe . . . Rockville

Georgia R. Hodges . . . Rockville

Anna N. Goldman . . . Rockville

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Interchange Corner

Product support receives calls from time to time about our computer generating "wrong answers." Generally, the "fault" lies in the precision with which a binary machine represents numbers. Consider the following FIV program:

```
A = 0.1
B = 1.1
C = 1.2
IF (A+B.EQ.C) PRINT, "EQUAL"
IF (A+B.NE.C) PRINT, "NOT
EQUAL"
STOP
END
```

This prints "NOT EQUAL." BAS and FOR versions also fail, in each case for three reasons:

First, the problem of expressing a number "exactly" in 36-bit words. In a computer word the left-most 8 bits represent the exponent, the right-most 28 bits represent the mantissa. Unless a number can be expressed exactly as the sum of powers of two (e.g., 2, 4, 8, 16, 1/2, 1/4, 1/16), it will not be precisely represented. Try to express one-third exactly, with 8 digits!

Second, before adding or subtracting two numbers of different magnitudes, the processor shifts the mantissa of the

smaller number, so the exponents are equal. In other words, when a very large number is added to a very small number, the end of the small number ends up in the bit bucket.

Lastly, when FIV says ".EQ." it means just that, to the very last bit. The value of a number as reflected when printed is irrelevant. FIV I/O routines round to so many places when printing, and do not reflect the actual internal value. So it is quite possible for two numbers to print identically to eight places, yet be different in the last bit, and hence "not equal."

For customers who do not appreciate this accuracy headache, there are some ways to work around it. If one is not worried about comparing binary numbers, possibly double precision is the answer, pushing the inaccuracy out to roughly the 16th place. It might also be wise to point out that most accounting library packages use integer arithmetic throughout — GFAST\$ is an example. For the problem of binary comparison, one could say that two numbers are "equal" if their difference is less than a certain tolerance — smaller than the least "significant" digit, but larger than the roundoff noise.



Art Baker

Division Nominee for GE Award: Art Baker

Art Baker, account manager in Syracuse, is the division nominee for the Phillippe Award for distinguished public service. For the past twelve years Art has held a number of leadership roles in community agencies in Syracuse, and for seven years he has been a member of the Board of Administrators for the GE Employees Federated Community Service Fund.

Recognition of his contribution to this Board's operation was evidenced by his appointment in May as the

Board Chairman. The Fund which he heads solicits and distributes approximately \$350-450,000 each year to an increasing number of community social and health service organization.

This year Art has contributed to the work of a separate collection, investment and ultimate distribution of a half million dollars of employee funds for a major hospital expansion program in Syracuse, a critically important local project.



Banking Industry — Full Speed Ahead

Jim Brady, manager of banking industry sales, quotes figures from Quantum Science that boggle the mind. "Spending over \$2 billion a year in data processing puts the banking industry second only to the U.S. government in its use. Banking is the third largest industry user of remote computer service in the United States. The top three banks in the country have combined assets greater than the combined assets of the top eight Fortune 500 companies. The banking industry is forecast to grow at 30% a year and by 1976 should be the largest user of outside data services."

Jim has nearly four years of General Electric, Information Services, and banking industry sales behind him, and is proceeding with enthusiasm to increase business with our present banking customers, and to reach the primary market of the top 100-150 banks of the 13,000 in the U.S. The banking industry maintains the highest percentage of in-house IBM equipment in the country — putting CRISP III/70 service into the picture.

"We will stress the international network which is pertinent to the top 50 banks," says Jim of his sales plans, "and we will push our new and projected offerings to present customers."



Jim Brady

1974 Medical Claims Must Be Filed

Have you claimed your 1974 medical costs yet?

Bills for 1974 medical expenses covered by the General Electric Insurance Plan must be submitted by the March 31, 1975 deadline.

A statement of claim form (FN-688-XS) must be completed each time an employee submits a claim for covered medical expenses for himself or a qualified dependent. These forms are available from the medical insurance office, Gwen DeLacy, in Rockville.

Here are a few general tips that should help you in filing your medical insurance claim correctly and completely:

- Pharmacist's bills for drugs and medicine requiring a physician's prescription must include the prescription number, the date dispensed, full name of the patient, full name of the employee, and the amount charged.
- Physician's bills may be attached to the statement of claim instead of having the physician or surgeon complete the appropriate portion of the form if the following information is included on the bill: name of the patient and employee, dates of treatment, diagnosis, amount of the charge, and the name and address of the physician.

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For General Electric Employees Only