

A FRENCH ACCOUNTING PACKAGE : GAEL 3
AN EXERCICE IN PORTABILITY FROM IBM TO HP 3000

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A. THE PACKAGE

1. General presentation

SLIGOS - set up GAEL 3 on the bases of knowledge gained from the experience of using a product already existant - that is, a general accounting program used in bureau service for several years.

GAEL 3 has the following aims :

- to enable an easy adaptation to the management methods of each company thanks to a highly developed personnalization. Input document, data composition, chart of accounts, are customized to the needs of each company.
- to facilitate a rational processing of the general, analytical and budgetary accounting.
- to be able to handle several independant accounting procedures simultaneously.
- to establish an accounting data base containing the data required for specific additionnal applications.
- to be used very easily.

2. Who is concerned by GAEL 3

a. data processing departments

GAEL 3 offers a processing philosophy which greatly sim-

plifies processing handlings.

the technical point of view

- a single point of entry is used to receive each user's data whether this concerns the updating of permanent files or accounting entries.
- no set format for receiving the data is stipulated, thus each user may design his own entry forms and this makes it possible to integrate GAEL 3 into an already existing data processing system by simply providing for the necessary interfaces.
- the printing of the results is standardized, and a single accounting document is used for the printing.
- the processing progression is automatic according to user's request.
- for large numbers of companies the system adopts a processing by lots of a thousand users maximum, taking over the control of the file belonging to each lot.
- service routines enable the general back up of the data base, its reorganisation, printing or interrogation.
- program controls protect the files during their processing and their updating.

b. accounting departments

- in the presentation of results GAEL 3's classical form allows it to be adopted by all.
- in general accounting all the accounts of clients and suppliers can be integrated into the chart of accounts, though remaining independant to be used and printed separately.
- the data acquisition, being in variable format, makes it possible for each user to :
 - . employ his personnalized input documents
 - . introduce the useful data without any restriction while,

however, also treating specific information, if desired, via interfaces if needed.

- the system allows a firm to handle several accounting procedures for its subsidiaries, agencies, factories, etc...
- in addition to a general accounting system and a budgetary control GAEL 3 offers two types of analytical accounting which may remain fully independent (by organizational unit, project, fund, activity a.s.o.)

3. to both of them

- each user may have his own chart of accounts and basic document when he has several accounting systems.
- during the same processing run the system independently handles the bookkeeping problem of each user : current period, end of period, end of year, a.s.o.
- the system can automatically correct certain errors (in totalling, coding...) in order not to delay the processing of bookkeeping.
- the chart of accounts can be adapted to different fiscal laws, and the system can handle entries presented in terms of foreign currencies.
- upon request the system provides enough data to enable an accurate invoicing of the users when an internal invoicing procedure exists in the firm.

4. Characteristics

GAEL 3 is written in ANS Cobol, and it is thus adaptable to most of the systems presently on the market.

A minimum configuration of two disk units is required. Tape units are optional however during certain phases of processing their use is strongly recommended.

The ideal configuration is three disks units and two tapes

units.

SLIGOS has developed an original technique for the organization of files to set up the data base ; the performances obtained are not expensive, whatever the volume processed.

GAEL 3 is available for the following computers.

- IBM 3
- IBM 360/370 DOS and OS
- CII HB 64 series
- BURROUGHS small and medium
- HEWLETT PACKARD 3000

Characteristics of the data base :

length of account record : 300 bytes

length of bookkeeping entry : 134 bytes

B. ADAPTING GAEL 3 FROM IBM/370 TO HP/3000 COBOL

Within 2 weeks of the order, SLIGOS supplied a mag tape comprising 16 source programs, and about 25 000 lines of COBOL Code, as well as a listing of the tape contents, and a complete set of manuals.

The translation process included four steps.

1. Starting from the original tape (encoded in EBCDIC), translation into ASCII, creating and formatting the GAEL source library, extracting and storing into different source files the various programs. This was done using FCOPY.
2. Checking the source library to delete unnecessary members, and adapting the others to the HP/3000 COBOL format. This was done using EDITOR. At this point, an EDITOR USE file was developed for step 3.

There were two main reasons for source members to be deleted from the library :

- discrepancies between the formats of the ENVIRONMENT DIVISION ASSIGN system name in HP/3000 and IBM/370 COBOL.
 - wholesale deletion of anything related to the IBM ISFMS access method, to be replaced by CALL's to KSAM intrinsics.
3. Using EDITOR, conversion of source programs from IBM/370 to HP/3000 COBOL, computing, preparing and saving into a newly-created account.
- the main problems encountered on this phase were:
- a. converting ISFMS i/o statements to KSAM CALL's. This was done using specially designed source library members, and extensive use of the COPY... REPLACING... BY... clause.
 - b. Rewriting GVLMT, a direct access i/o module, into SPL (HP/3000 COBOL does not currently support a REWRITE clause)
- GVLMT was the sole module to be rewritten.
- c. Incorporating segmentation into programs. This process was made much easier by the fact that they were written in a truly professional and consistent manner.
 - d. Writing from scratch the various batch jobs, using JCW'S to simulate OS/370's conditional JCL.
4. Testing twice :
- with test data supplied by SLIGOS, and checking with results produced on an IBM/370 computer.
 - processing a month's actual data, and checking with the results produced by the current accounting program.

The whole translation process took about one man's month.