

REX/3000: USE OF A NEW REPORTING LANGUAGE
Lynda Long
est, an educational corporation

OUR PROBLEM:

We had a management information system (m.i.s.) working on a national timesharing service, and wanted to rewrite it for the HP-3000. We wanted to use Image, and found that the resulting database included 3 manual master and 10 detail datasets (many with sorted search items). The system has 64 regular reports, with the following requirements:

- access of multiple datasets, as well as ASCII files and other databases
- complex selection criteria
- formatting with breaks, totals, etc.
- cross-tabulation
- comparisons of variables over various time periods
- sorting and ranking, as well as arithmetic computations

In addition, the system is alive and dynamic. The reports change over time, as the company grows and develops. Occasionally, reports must be extensively modified very quickly.

As we looked for a language appropriate for this system, we soon realized that neither the standard languages (e.g., COBOL) nor the available statistical packages (e.g., SPSS) were ideal. We wanted a language that:

- is English-like, easy to use and very maintainable
- is modular, preferably allowing use of structured techniques
- can be used with Image, without the programmer needing to use Image intrinsics
- includes high-level statements to perform the reporting functions needed

OUR SOLUTION:

Our solution was to have the REX/3000 report writing language written by Gentry, Inc. (see description elsewhere in these proceedings) to meet all the requirements listed above. All the m.i.s. reports were then written in REX/3000, in about one-fifth the time that would have been required to write the reports in COBOL. (The time to write the REX/3000 compiler and then to write the reports in REX/3000 is approximately the same as would have been required to write all the reports in COBOL. The benefit is that now we have a useful tool.)

OUR EXPERIENCE:

In the first five months after beginning to use REX/3000, we completed all 64 reports for the management information system with the equivalent of two and a half full-time programmers. The 42 reports in the weekly cycle run in a batch job in about two hours (4000 CPU-seconds).

In addition:

- Several experienced programmers (not working on the m.i.s. project) picked up REX/3000 with virtually no training or documentation and produced reports for several different applications. In one case, the reports were completed in half the time it would have taken to write them in BASIC. In another case, new reports on multiple datasets were written and generated overnight.
- Two inexperienced programmers learned to use REX/3000 and wrote reports for other applications in approximately one-fifth the time to learn and code them in BASIC.
- We made modifications to the original m.i.s. reports very quickly.

CONCLUSION:

We will be using the REX/3000 report writing language for all future reporting requirements on our Image databases, with the exception of special statistical requirements. It has proven to be easily learned, powerful, flexible, and easy to use, and it has allowed us to be more responsive to our users' requests.