The Role of the SAS System in the Information Age

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Introduction

The information age offers more than "productivity gains" from advances in computer technology. The information age is the exploitation of hardware and software technology in a way that challenges one to expand his or her analytic capabilities. The pace that one expands these analytic capabilities accelerates with each advance in hardware and software. Another major advance occurred with the October 1983 announcement of the IBM Personal Computer XT/370. With the exception of performance modifications, the SAS system should run on this XT/370 work station in a "stone-colon" fashion. By exploiting the technological revolution of the IBM Personal Computer XT/370, the SAS system will continue to play a major role in the information age.

IBM's October Revolution

A revolution occurred in October 1983. IBM announced the Personal Computer XT/370, a desktop work station that executes mainframe programs (for example, P01 Optimizer and Assembler H under VM/CDMS) in addition to traditional microcomputer software such as spreadsheet packages. Two major implications of IBM's announcement are: (1) SAS Institute Inc. could fine-tune its products to run on the IBM Personal Computer XT/370; (2) the need to overhaul mainframe software for microcomputers will become obsolete.

The IBM October Revolution symbolizes the race toward smaller, more powerful, and cheaper computers, and reaches for beyond the ability to "produce more"—quickly and cheaply. Hardware advances instigate a software revolution. Fourth and fifth generation programming languages, and the imminent streamlining of the SAS system for the IBM Personal Computer XT/370.

Together, the hardware and software movements are essential to automate day-to-day life. In turn, mechanization is essential to the transformation of American society to one in which information work is the chief economic activity. 1

The Need for a Balanced Transformation

Without a balanced approach to automation, society is at risk of remaining in the industrial age, that is, in an assembly line age where people focus on maximizing efficiency and output.2 Balance is more than mechanical solutions to the clerical drudgery of secretaries, computer scientists, and quantitative analysts.3 Balance allows one to exploit the hardware and software revolutions by automating repetitive and time-consuming tasks for:

• free secretaries from the typing treadmill and open the door for them to administer the flow of information by developing computerized indexes of correspondence, reports, and data bases
• allow computer scientists to quickly develop comprehensive and easy-to-use information systems
• give analysts sophisticated quantitative tools to summarize an increasing information flow with:
  speed
  accuracy
  clarity

Ultimately, a balanced approach to automation will provide senior management with timely information to make critical decisions.

The SAS System in the Information Age

Through its many powerful components, the SAS system leads to balanced computing by meeting information needs and allowing for quicker and better decisions. The 1982 SAS User's Guide: Basics Volume best describes this system:

SAS is a computer software system for data analysis. Since its beginning in 1966, the goal of SAS has always been to provide data analysts one system to meet all their computing needs. When your computing needs are met, you are free to concentrate on results rather than on the mechanics of getting them.4

Microcomputers are vital components in the balanced automation of repetitive and time-consuming tasks. With easy-to-learn and easy-to-use software, microcomputers also help a growing number of people meet expanding information needs. Without microcomputers, some people would still be locked out of the information age. Some people would have little chance of even entering the information age.

Where does the SAS system fit in the race toward smaller, more powerful, and cheaper microcomputers? Will SAS Institute Inc. streamline its products for the IBM PC XT/370? Will they develop links between its products and microcomputer spreadsheet packages and data base management systems (DBMS)? One can only speculate.

Streamlining the SAS system for the XT/370 would transfer the tools of existing and new SAS system users from a mainframe to a microcomputer environment. Developing links to microcomputer software would significantly expand the computing capabilities of all users.

If SAS Institute Inc. is to expand its role in the information age, it will have to do more than develop a portable SAS system for the IBM PC XT/370 and links to microcomputer software. They will have to design a portable SAS system that reduces new users who are accustomed to mastering microcomputer software within hours or days, and potential users who cringe at the word "computer."5

Summary

New hardware and software products come into the marketplace at a phenomenal speed. It is hard to predict which of these products will survive the fierce competition in the months and years to come. With this rapidly changing environment, SAS Institute Inc. has a formidable task. That task is to support a balanced approach to the information age. SAS Institute's track record is strong evidence that this balance will go well beyond condensing its mainframe software for microcomputers.

Footnotes

1. SAS is a registered trademark of SAS Institute Inc., Cary, NC, USA.
2. IBM Personal Computer XT/370 is a registered trademark of International Business Machines Corporation.
4. ibid., p. 160.

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