Book Review

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Title: **Tuning SAS Applications in the MVS Environment**
Author: Michael A. Raithel
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I have been involved with IBM mainframe computers using the MVS operating system or it's predecessors for nearly 30 years and found this book to contain some of the most useful and best organized information for working in this Environment. It's primary purpose is to show programmers of all levels how to exploit the MVS environment to create and tune efficient SAS applications.

Chapters 1 and 2 cover the basics of defining and measuring performance and efficiency and can be skipped or scanned by experienced programmers. The information in these chapters, however, should be carefully reviewed by anyone new to data processing.

Chapter 3 shows how to display and capture SAS system performance information to include statistics within the SAS system and in the MVS job log. It also contains a very detailed description of the contents of the Catalog, Contents and Options listings.

Chapters 4 and 5 show how to adjust the block and buffer sizes of SAS data libraries to achieve maximum performance. These techniques were applied to a SAS job that we had been running on a regular basis, resulting in a 60% reduction in I/O accesses and elapsed run time. In my opinion, these chapters are the heart of the book and should be thoroughly read.

Chapter 6 contains a very interesting description of various types of indexes and a detailed discussion of when and how they should be applied.

Chapters 7 and 8 cover techniques for the efficient processing of sequential files on both DASD and tape media and Chapter 9 does the same for VSAM data sets. The emphasis in these chapters is heavily on the MVS environment and lightly on techniques specific to the SAS System. It should appeal to all IBM programmers whether they are using SAS or not.

Chapter 10, however, is dedicated to the use of the SAS stored program facility and would be of interest only to SAS programmers.

Chapter 11 describes the use of computer memory hiperspace to avoid I/O operations. It is the clearest description of this MVS feature that I have ever read and should be much preferred to the documentation found in the IBM manuals.

The 12th and final chapter covers all the factors involving resource contention such as tape mounts, DASD shortages, job queue waiting, and competition with higher priority tasks. Many people are of the opinion that these problems are beyond their control but the book says that this is not necessarily so and offers some useful coping strategies.

In short, this book should be required reading for anyone programming in the IBM MVS environment even if they are not using and never intend to use the SAS System. Despite it's relatively high cost, it is worth every penny and should be made available for every SAS programming group.