

CHAPTER

1

Introduction to the SAS/ACCESS Interface to ADABAS

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Introduction

This chapter introduces you to SAS/ACCESS software and briefly describes how to use the interface. This chapter also introduces the sample ADABAS data, SAS/ACCESS descriptor files, and SAS data files used in this book.

Purpose of SAS/ACCESS Software

SAS/ACCESS software provides an interface between the SAS System and the ADABAS database management system (DBMS). With the SAS/ACCESS interface, you can:

- create SAS/ACCESS descriptor files using the ACCESS procedure
 - directly access ADABAS data from within a SAS program, using the SAS/ACCESS descriptor files created with the ACCESS procedure
 - extract ADABAS data and place it in a SAS data file using the ACCESS procedure, the DATA step, or other SAS procedures
 - update ADABAS data using the SQL procedure, SAS/FSP software, SAS/AF software, and the APPEND procedure.
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Overview of Using the Interface

The SAS/ACCESS interface consists of two parts:

- the ACCESS procedure, which you use to define the SAS/ACCESS descriptor files
- the interface view engine, which allows you to use ADABAS data in SAS programs in much the same way as you use SAS data files.

The ACCESS procedure enables you to describe ADABAS data to the SAS System. You store the description in SAS/ACCESS descriptor files, which you can use in SAS

programs much as you would use SAS data files. You can print, plot, and chart the data described by the descriptor files, use them to create other SAS data sets, and so on. Several examples of using ADABAS data in SAS programs are presented in Chapter 3, “Using ADABAS Data in SAS Programs,” on page 17. Using SAS/ACCESS descriptor files to update ADABAS data from within a SAS program is shown in Chapter 4, “Browsing and Updating ADABAS Data,” on page 39.

The interface view engine is an integral part of the SAS/ACCESS interface, but the interface’s design is transparent, so you seldom have to deal directly with the engine. The SAS System automatically interacts with the engine (via the SAS/ACCESS descriptor files) when you use ADABAS data in your SAS programs. The SAS System and the interface view engine do much of the work automatically, so you can simply use ADABAS data in SAS programs in much the same way you use SAS data.

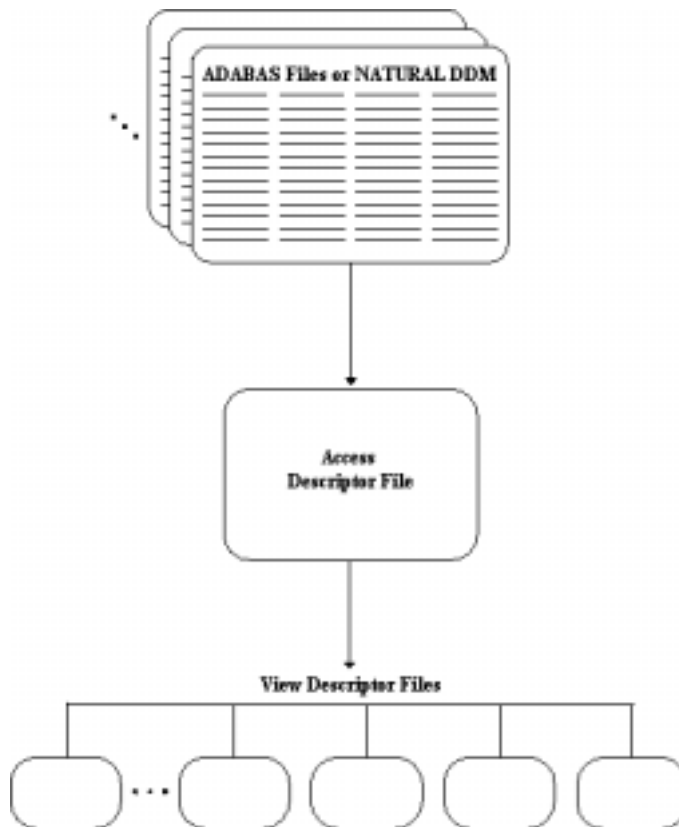
SAS/ACCESS Descriptor Files

SAS/ACCESS software uses SAS/ACCESS descriptor files to establish a connection between the SAS System and ADABAS. You create these files with the ACCESS procedure.

There are two types of SAS/ACCESS descriptor files: *access descriptors* and *view descriptors*.

Figure 1.1 on page 4 illustrates the relationships among ADABAS data, an access descriptor, and view descriptors.

Figure 1.1 Relationship among ADABAS Data, an Access Descriptor, and View Descriptors



Access Descriptor Files

Access descriptor files are of member type ACCESS. Each access descriptor holds essential information about the ADABAS data you want to access, for example, the ADABAS file number or NATURAL Data Definition Module (DDM) name, the data field names, and their data types. It also contains corresponding information related to the SAS System, such as the SAS variable names, formats, and informats.

An access descriptor can describe only one ADABAS file or DDM; that is, you cannot join two ADABAS files or DDMs with a single access descriptor.

View Descriptor Files

View descriptor files are sometimes called *views* because their member type is VIEW. This book uses the term *view descriptor* to distinguish them from views that are created by the SAS SQL procedure.

Each view descriptor can define all of the data or a particular subset of the data described by one access descriptor (and therefore one ADABAS file or DDM). For example, you may want to use only three or four possible data fields and only some of the logical records. The view descriptor allows you to select the data fields you want and, by specifying selection criteria, to select only the specific data you want. For example, your selection criteria might be that the date of transaction is July 3, 1987, and that customers' names begin with W.

Typically, for each access descriptor, you will have several view descriptors, selecting different subsets of data.

You can join data from multiple ADABAS files or NATURAL DDMs with the SAS System SQL procedure. The SQL procedure can join data from SAS data files, PROC SQL views, and SAS/ACCESS view descriptors into one resulting file. In addition, SAS/ACCESS view descriptors can come from different database management systems. For examples that use the SQL procedure, see Chapter 3, "Using ADABAS Data in SAS Programs," on page 17 and Chapter 4, "Browsing and Updating ADABAS Data," on page 39.

Example Data in This Book

This book uses several NATURAL DDMs to show you how to use the SAS/ACCESS interface to ADABAS. The data were created for an international textile manufacturer. This company's product line includes some special fabrics that are made to precise specifications. The DDMs are named CUSTOMERS, EMPLOYEE, INVOICE, and ORDER. All the data are fictitious.

The ADABAS data are designed to show how the interface treats ADABAS data. They are not meant as examples for you to follow in designing ADABAS files or NATURAL DDMs for any purpose.

Appendix 3, "Example Data," on page 137 gives more information about the ADABAS data, SAS/ACCESS descriptor files, and SAS data files used in examples. The information on the ADABAS data includes the ADABAS statements that created each file, the data each ADABAS file contains, and a description of the NATURAL DDMs. The information on the SAS/ACCESS descriptor files includes their definitions and any selection criteria that were specified for them. The information on the SAS data files includes the SAS statements that created each data file and the data that each contains.

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