**SAS® DATES SIMPLY STATED**  
James C. Stokes, Computer Aid Inc., Allentown, PA

**ABSTRACT**
How many times have you heard "SAS® dates reflect the number of days since January 1, 1960," and acknowledged that fact with a no-problem-I-can-handle-that nod, only to find yourself scratching your head in confusion when you attempt to work with dates in SAS? This paper will track the evolution of a standard date to its SAS form, demonstrate how dates are compared using SAS, and describe some of the common formats used in conjunction with SAS dates.

**SAS DATE DEFINED**
A SAS date is defined as the number of days between January 1, 1960, and the given date. For example, January 1, 1960, expressed as a SAS date, would be 10958.

**EVOLUTION OF A SAS DATE**
Dates are commonly stored in non SAS data sets in the form of month day year. Before doing any kind of manipulation or comparison of this date in the SAS system, the date must be converted to a SAS date. This can be accomplished by reading in the date variable with the appropriate date format. If January 1, 1990, is stored on a file as 010190, the user would need to use the MMDDYY6. format to convert the standard date to a SAS date. The following code can be used to read in a standard date value from a non-SAS data set:

```sas
INPUT ENDDATE MMDDYY6.;
```

After executing the input statement above, a variable named ENDDATE will have been created and will contain the value of 010190 in its SAS form, which is 10958.

**COMPARISON OF DATES**
Once a date has been converted to a SAS date, comparison of dates is as simple as comparing numerics. If the user would like to select only observations with an ENDDATE after January 1, 1990, a date constant can be used. To express January 1, 1990 as a date constant, the user would need to code the following: '01JAN90'D. The following code would be used to select only the observations that had an ENDDATE equal to or greater than January 1, 1990:

```sas
IF ENDDATE => '01JAN90'D;
```

After executing the subsetting IF statement above, only observations with an enddate on or after January 1, 1990 would be processed beyond that point.

**COMMON DATE FORMATS**
Date formats are used primarily to convert standard dates to SAS dates and to display SAS dates in procedure output in an intelligible manner. The user can display SAS dates in various different forms using SAS date formats. Some of the formats that are commonly used are DATE7., MMDDYY8., MONYY5., WEEKDATE., WORDDATE., and YYQ. An example of how January 1, 1990 would be displayed in each of the formats follows:

- DATE7. 01JAN90
- MMDDYY8. 01/01/90
- MONYY5. JAN90
- WEEKDATE. MONDAY, JANUARY 1, 1990
- WORDDATE. JANUARY 1, 1990
- YYQ. 90Q1

**CONCLUSION**
Although many of the SAS date formats available to the user have not been explored in this paper, you should have a good understanding of what a SAS date is and how it evolved, how one can compare dates in SAS, and be familiar with some of the more popular date formats.

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