

Dates for the release of SAS version 9.1 were circulating at the SEUGI 21 conference in Vienna in June (see the News section below), but there are still a large number of SAS users out there who have yet to convert from 6.12 to 8. *VIEWS News* will, therefore, continue to provide hints and tips for all SAS users. In this issue we will be looking at tips for improving graphical reports, reducing disk space usage, speeding up processing time and a new way to access SAS datasets. We are also announcing the first of a series of Books-By-User Events in November (see the News - Stop Press! section below).

If you would like to contribute an article, or discuss the possibility of doing so, please send an email to me at newsletter@views-uk.org. A list of possible subjects for your articles can be found on the *VIEWS* web site, and anyone is very welcome to add to that list by sending emails with your own questions to newsletter@views-uk.org.

Philip R Holland (Newsletter Editor)

Membership of *VIEWS* is **free** and you can register for notification of all future *VIEWS* events by emailing us at membership@views-uk.org, making certain you include your name and postal address. If you would like to receive a free copy of the quarterly *VIEWS News* by email, please remember to also include your email address.

News - Stop Press!

Announcing a *VIEWS* Books-By-User Event

Date: Tuesday 18th November 2003
Venue: Churchill Intercontinental Hotel,
 Portman Square, London
Presenter: Lauren Haworth

THE SAS OUTPUT DELIVERY SYSTEM

09:15 – Registration
 09:45 – ODS Output Destinations: The Basics
 10:15 – ODS Style Templates
 11:15 – Break
 11:45 – ODS Style Templates continued
 13:15 – Lunch
 14:15 – ODS Tips and Tricks
 15:00 – ODS for Print, Report and Tabulate
 15:40 – Break
 16:10 – HTML for the SAS Programmer
 16:40 – Close

The cost for the BBU Event will be £170.00 plus VAT. This includes refreshments, a seated lunch and a copy of the book “**Output Delivery System: The Basics**” by Lauren Haworth.

To book a place please complete the form on the *VIEWS* web site. Note that there are currently only 65 places available and payment must be received by Tuesday 11th November.

<http://www.views-uk.org>

The Consultant

This part of *VIEWS News* is where you can get your technical questions answered. Send your questions to the Editor.

Using Colour Design For Effective Visual Communication

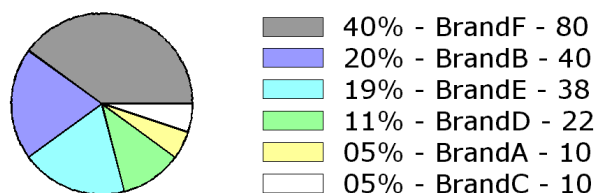
Q: Can you give me some tips on how to improve my graphical reports?

A: The following tips are aimed at making your graphical reports more readable:

1. Use colour to communicate, not to decorate.

Pie Chart Legend Must Communicate with Colour

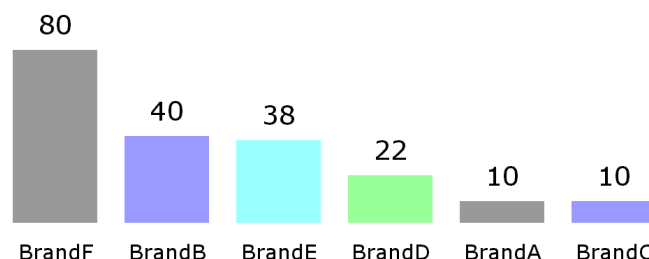
Market Share, Brand, and Sales in Billions of Units



2. Use colour consistently. Even when there is no intended pattern to colour use, viewers will assume that there is one, or will be perplexed, or at least slowed down, by trying to find it. Below is a simulation of a real illustration, with the details changed. It fairly depicts a real published misuse of colour.

Confusing Colour Use in a Business Magazine

Units Sold (in Billions) by Brand



3. If the viewer cannot see a colour difference, there is none.

How to Colour-Code Data Display

"Traffic Lighting" Some Better Alternatives

333	333	333	333	-222	-222
567	567	567	567	-111	-111
999	999	999	999	000	000
				+111	+111
				+222	+222

Commonest color blindness: Red/Green indistinguishable
For signed data, you can use $2N + 1$ colors/categories, still using three hues, but more shades of non-White.
Light Grey can be a good substitute for White.

4. Don't assume that the English language names ascribed to colours by software are accurate descriptions. Make yourself a colour chart. Here is a simple SAS/GRAPH program:

```
PROC GSLIDE;
NOTE J=C
F='Courier New/Bold' H=1 C=H0000000
"C=CX9900CC" MOVE=(+0.5,-1.25)
F='Monotype Sorts' H=4 C=CX9900CC
'6E'x MOVE=(+2,1.25)
F='Courier New/Bold' H=1 C=H0000000
"C=CXFF9933" MOVE=(+0.5,-1.25)
F='Monotype Sorts' H=4 C=CXFF9933
'6E'x;
NOTE J=C
F='Courier New/Bold' H=1 C=H0000000
"C=H02D80FF" MOVE=(+0.5,-1.25)
F='Monotype Sorts' H=4 C=H02D80FF
'6E'x MOVE=(+2,+1.25)
F='Courier New/Bold' H=1 C=H0000000
"C=H09680FF" MOVE=(+0.5,-1.25)
F='Monotype Sorts' H=4 C=H09680FF
'6E'x;
RUN;
QUIT;
```

If you cannot use these Windows TrueType fonts, use F=CENTX and replace '6E'x with '03'x. Here is the result:

C=CX9900CC		C=CXFF9933	
C=H02D80FF		C=H09680FF	

The CX-prefixed colour codes are from the Browser-Safe (aka Web-Safe) subset of the RGB colour system. The

<http://www.views-uk.org>

H-prefixed colour codes are from the HLS colour system. Browser-safe colours are best suited for web pages, so that web page viewers and web page creators see the same colours. HLS colours are best suited for hardcopy, and are more easily "tuneable" than RGB colours. More information about these colour systems will be presented in the future.

LeRoy Bessler, Fortis

Processing Just The Last Observation

Q: I need to do some processing on just the last record. Do I have to read through all the records within the data set?

A: Whilst this obviously does work there is a much more efficient method:

The **POINT=** and **NOBS=** options both work at compile time and hence are very efficient.

```
DATA temp;
DO x=1 TO 20000000;
OUTPUT;
END;
RUN;

DATA _NULL_ ; * (1);
SET temp POINT=nobs NOBS=nobs;
PUT x=;
STOP; *required statement;
RUN;

DATA _NULL_ ; * (2);
SET temp END=eof;
IF eof THEN PUT 'last obs';
RUN;
```

In tests step (1) took 0.07 seconds real time and less than 0.01 seconds cpu time to complete, whereas step (2) took 11.91 seconds real time and 7.04 seconds cpu time to complete.

Amadeus Software Consultancy Team

Did You Know?

If you have a useful hint or tip, please send it to the Editor and share it with the **VIEWS** membership.

Using SAS Datasets Without Libnames

[SAS 8 + 9] From SAS version 8 you can directly reference SAS datasets, without needing to define a libname. This is done by enclosing the physical file name in quotes.

```
* Create a version 6 dataset;
DATA 'c:\test.sd2';
RUN;

* Create a version 8 dataset;
DATA 'c:\test.sd7';
RUN;

* Create a version 9 dataset (using SAS 9!),
or a version 8 dataset (using SAS 8!);
DATA 'c:\test.sas7bdat';
RUN;

* Access a dataset directly;
PROC PRINT DATA='c:\test.sas7bdat';
RUN;
```

Phil Mason, Wood Street Consultants

Saving Space Within A Data Table

Are the columns on your data table too wide? Perhaps they have inherited default attributes and are taking up too much space! The program below allows you to check the maximum required width of columns within a data table. Thus allowing a programmer to specify more sensible column widths.

```
%MACRO max (inputds=);
PROC CONTENTS DATA=&inputds
                OUT=info (KEEP=name) NOPRINT;
RUN;

DATA _NULL_;
SET info NOBS=nobs;
IF _N_=1 THEN CALL SYMPUT('num',nobs);
CALL SYMPUT('varname'!!compress(_N_),name);
RUN;

PROC DATASETS LIB=work NOLIST NODetails;
DELETE max_all;
QUIT;

%DO i=1 %TO &num;
DATA max (KEEP=max name);
LENGTH name $32;
SET &inputds (KEEP=&&varname&i) END=eof;
RETAIN max 0;
maxlen=MAX(LENGTH(&&varname&i),max);
IF eof;
name="&&varname&i";
RUN;

PROC APPEND BASE=max_all DATA=max;
RUN;
%END;
%MEND max;

%max (inputds=sashelp.class);
```

Amadeus Software Consultancy Team

Formats, Options, and Functions

This section is devoted to the description of useful, or unusual, SAS Formats, Options, and Functions.

Changing the text of a variable to upper-case in a Data step for a report should not be necessary. You can use the **\$UPCASEw.** format to display the text in upper-case without having to change any of the data. There is also an equivalent informat **\$UPCASEw.**, which will read any text, but will store it as upper-case values. Note that there are no formats, or informats, for displaying, or reading, text in lower-case.

The **-SPLASH** configuration option is used to specify whether or not the SAS logo screen is displayed when SAS initiates. **-SPLASH** (or **-SPLASH ON**) causes the logo screen to display when SAS initiates. **-NOSPLASH** (or **-SPLASH OFF**) causes the logo screen not to display. This configuration option replaced the **-LOGO** and **-NOLOGO** options in SAS version 6. The **-SPLASHLOC** configuration option can be used to add your only logo screen.

Have you ever wanted to check if a specific SAS component is currently licensed when you run a SAS program? What you would need to use is the **SYSPRODQ** function. This returns a value of 1 if the product's final expiration date has not been reached, 0 if it is not licensed, and -1 if it is not recognised. Note that **SYSPRODQ('base')** always returns a value of 1, as the Data step cannot run without a valid Base SAS licence!

News

Report on the SEUGI 21 Conference in Vienna

The SEUGI 21 Conference was held in UNO City, on an island in the middle of the Danube on the outskirts of Vienna. The conference, attended by over 2,500 delegates, was split into 3 theme-based days: SAS in the Board Room (high level for executives), SAS in Action (more technical), and SAS Technology Expertise. None of the days included more than a handful of 'technical' presentations, other than in the Technology Forums, where SAS staff presented the latest tools and techniques from SAS version 9.1 (limited availability is expected in October 2003!). Although the presenters in the Technology Forums were all available for detailed discussions before and after their sessions!

My general impression of the conference was that SAS are moving their products towards pre-packaged solutions. While SAS version 9.1 undoubtedly offers many new and powerful features for developers, they were rarely mentioned. Whereas complete solutions for data mining, data warehousing, scientific discovery and event-driven marketing were prominently featured.

I will continue to attend the SEUGI conferences, not specifically for the presentations, but because it is the most cost-effective way to talk to the top European SAS developers face-to-face. That is why I will be in Copenhagen next year!

Philip R Holland (Newsletter Editor)

In Brief

- Back issues of *VIEWS News* are available from the *VIEWS* web site.
- Please also note that members will now only receive notification of when the latest issue of *VIEWS News* has been uploaded to the web site, and will no longer receive a copy of the newsletter by email. This is in response to comments by members about the size of emails received.
- Please note that all the papers presented at the *VIEWS* 2003 Conference are now accessible from a link on the *VIEWS* web site. Also, all conference delegates will be receiving hard-copy and CD-ROM Conference Proceedings by post shortly.
- Phil Mason now has a daily SAS tips newsletter, which can be requested by going to www.woodstreet.org.uk and then clicking on Tips. Previous tips can also be found on the web site. This month's article from Phil was taken from a tips newsletter.
- SAS users looking for contracts, jobs, services and products may find what they are looking for on the Sponsored Links web page at www.hollandnumerics.com/CSP.HTM.

Diary

Are you organising an event that would be of interest to the *VIEWS* readership? Let us know as we are interested in all non-profit making events related to SAS.

September 2003

11 **Changes and Enhancements to SAS Version 9**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

30 **Rapid Solutions in Credit Risk and Customer Management**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

October 2003

15 **SAS User Forum 2003**, London

See www.sas.com/events/uk/userforum for further details.

23 **Tricks of the Trade**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

28 **Data Warehousing Explained**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

28 **SAS User Forum 2003**, Penrith, Cumbria

See www.sas.com/events/uk/userforum for further details.

November 2003

VIEWS News 24th edition

18 **VIEWS Books-By-User Event**, Churchill Intercontinental Hotel, Portman Square, London

We will be welcoming Books-by-Users author Lauren Haworth from the USA to speak to users for the whole day on ODS.

25 **Changes and Enhancements in SAS version 9 for the Applied Statistician**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

December 2003

2 **Communicating with SAS (Web, IntraNet, SAS IT and VB)**, Amadeus Software - FREE!

See the Amadeus Software web site for further details.

February 2004

VIEWS News 25th edition

May 2004

VIEWS News 26th edition

9-12 **SUGI**, Montreal, Canada

The SAS User Group International (SUGI) Conference is held each year and focuses on the technical aspects of SAS software.

19-21 **VIEWS 2004 Conference**, Commonwealth Conference & Events Centre, Kensington, London

The *VIEWS* Committee is looking for user papers to be written for the conference on technical SAS-related subjects.

June 2004

iba SEUGI, Copenhagen, Denmark

The SAS European User Group International (SEUGI) Conference is held each year and focuses on the more commercial aspects of SAS software.

All *VIEWS* event information will be posted and/or emailed to registered members of *VIEWS*, and will include an event application form. Please send your queries about any *VIEWS* events to events@views-uk.org, and don't forget to look at the web site for the latest news.

Contacts

Amadeus Software

Email:
info@amadeus.co.uk
Tel: +44-(0)1993-878287
Web: www.amadeus.co.uk

LeRoy Bessler
Fortis, USA

Email:
bessler@execpc.com

Phil Mason
Wood Street
Consultants Ltd

Email:
phil@woodstreet.org.uk
Tel: +44-(0)1491-201016
Web: www.woodstreet.org.uk

SAS UK

Tel: +44-(0)1628-486933
Web: www.sas.com/uk

VIEWS

Web Site

www.views-uk.org

Daniel Morris
Chairman

Email:
chair@views-uk.org
Tel: +44-(0)1993-878287
Web: www.amadeus.co.uk

Philip R Holland
Newsletter Editor

Email:
newsletter@views-uk.org
Tel: +44-(0)7714-279085
Fax: +44-(0)1763-244497
Web: www.hollandnumerics.co.uk

Membership secretary

Email:
membership@views-uk.org

Events secretary

Email:
events@views-uk.org

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