



NEWS

News, Hints, Tips, and Information for UK SAS® Users

Issue 25, 1st Quarter 2004

There is a graphical theme to this issue of *VIEWS News*, with another extract from Lauren Haworth's ODS book, and articles from Phil Mason and LeRoy Bessler. LeRoy Bessler has written an article in response to Lauren Haworth's article in *VIEWS News* 24, and Andy York (who we welcome as a new *VIEWS* Consultant!) has also offered an alternative to my article in the same issue. As always all your articles are warmly welcomed.

However, with the New Year I would like to encourage you to also think about SAS-related topics you could present at the *VIEWS 2004* Conference from 19-20 May 2004. Details of how to send presentation abstracts can be found in the Call for Papers article (see News 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.*

Stop Press!

Announcing the VIEWS 2004 Conference

The *VIEWS 2004* Conference will be a 2-day conference on Wednesday and Thursday 19-20 May 2004 at the Commonwealth Conference and Events Centre, Kensington High Street in London (www.commonwealth.org.uk).

Suggested streams this year are:

- Pharmaceutical and statistics
- Tips and Techniques
- Data Warehousing
- Which Product?
- New Stuff
- Tutorials
- Web
- Business Strategies
- Applications Development
- Systems Architecture
- Base SAS
- The Output Delivery System
- Reporting

- Graphics
- Upgrade Experiences

Bigger, Brighter, Informative and Independent

This year's conference is planned to be bigger, brighter, more informative, more independent and more valuable than ever before. Planned activities include networking, question and answer booth, papers, demonstrations, tutorials, lunch, mixer session, coders corner, proceedings, software and hardware vendor exhibitions, new software directions, 3rd-party add-on products and services, and much, much more.

The *VIEWS* committee have reacted to your suggestions for this year's conference. Improvements we plan to make are seated lunches, water available all day, time between sessions, and abstract listings available before the conference.

Value for Money

The 2-day registration fee will be £250+VAT, with a discounted 2-day rate of £100+VAT for academics.

Registration discount for presenters

Present a paper and pay 50% of the 2-day registration fee. We are looking for people to present papers on all aspects of their work, at all levels. Send your abstract, maximum 200 words, to abstracts@views-uk.org by 5 March 2004.

For up to date information, sponsorship options and on-line booking forms visit the *VIEWS* web site at www.views-uk.org.

The provisional agenda and registration forms will be mailed to you in March, we hope to see you at *VIEWS 2004*.

The VIEWS Committee

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 Pictures as Patterns in Bar Charts

[SAS 8] You can use the pattern statement to use a graphic image as the pattern for an area of a graph. This can be any image, perhaps a photo, or even another graph.

The following code demonstrates how to generate a series of pie charts and then to use each corresponding chart as a pattern in a bar of another graph. There is a bar for each age in our data, and a pie chart within that bar showing the male/female proportions for that age.

```
GOPTIONS RESET = ALL GSFNAME = g DEVICE = PNG
          XMAX = 6in YMAX = 4in XPIXELS = 1800
          YPIXELS = 1200 FTEXT = 'Arial'
          HTEXT = 5pct;
```

```

FILENAME g 'c:\temp\sex11.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 11;
  PIE sex;
RUN;

FILENAME g 'c:\temp\sex12.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 12;
  PIE sex;
RUN;

FILENAME g 'c:\temp\sex13.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 13;
  PIE sex;
RUN;

FILENAME g 'c:\temp\sex14.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 14;
  PIE sex;
RUN;

FILENAME g 'c:\temp\sex15.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 15;
  PIE sex;
RUN;

FILENAME g 'c:\temp\sex16.png';
PROC GCHART DATA = sashelp.class;
  WHERE age = 16;
  PIE sex;
RUN;

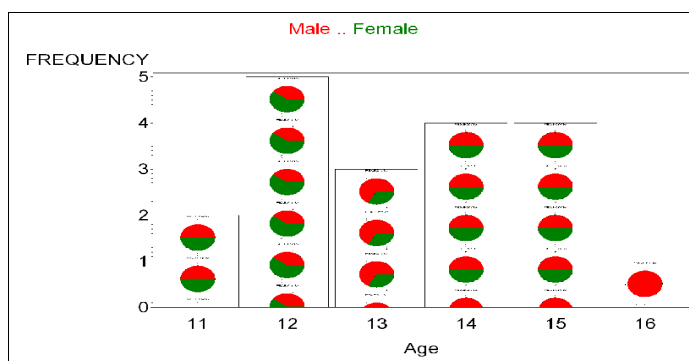
FILENAME g 'c:\temp\vbar.png';

PATTERN1 IMAGE = 'c:\temp\sex11.png';
PATTERN2 IMAGE = 'c:\temp\sex12.png';
PATTERN3 IMAGE = 'c:\temp\sex13.png';
PATTERN4 IMAGE = 'c:\temp\sex14.png';
PATTERN5 IMAGE = 'c:\temp\sex15.png';
PATTERN6 IMAGE = 'c:\temp\sex16.png';

TITLE C = RED 'Male .. ' C = GREEN 'Female';

PROC GCHART DATA = sashelp.class;
  VBAR age / SUBGROUP = sex DISCRETE
  WIDTH = 20 NOLEGEND;
RUN;
QUIT;

```



Phil Mason, Wood Street Consultants

(Reproduced from "Phil Mason's Daily Tips")

Combining Graphs with Text

[SAS 8] There are many ways to combine text and graphics in a single report. One solution for certain reports is to embed the graph into the PROC REPORT output.

First create the graph:

```

GOPTIONS DEVICE = GIF XPIXELS = 480
  YPIXELS = 360 GSFMODE = REPLACE;

TITLE 'Candy Bar Chart';
TITLE2
  'Annual Sales by Chocolate Type and Filling';

PROC GCHART DATA = candybars
  GOUT = work.candybarchart;
  VBAR3D filling / NAME = 'salesbar'
  SUMVAR = sales
  GROUP = chocolate;
RUN;
QUIT;

```

Second, create a report and embed the graph:

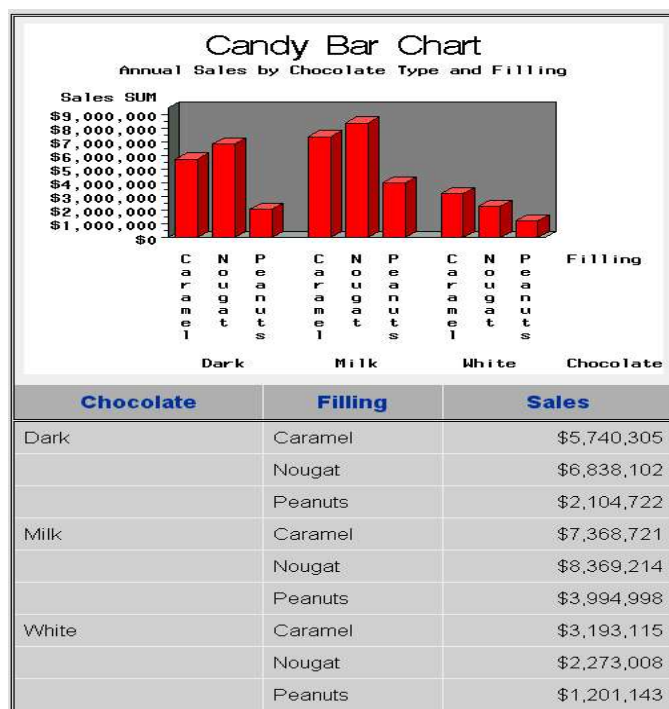
```

ODS HTML BODY = 'c:\temp\CandyBarReport.htm'
  GPATH = 'c:\temp\' (URL = NONE);

PROC REPORT DATA = CandyBars NOWD;
  COLUMNS chocolate filling sales;
  DEFINE chocolate / GROUP;
  DEFINE filling / GROUP;
  DEFINE sales / SUM FORMAT = DOLLAR10.;
  COMPUTE BEFORE _PAGE_ / CENTER;
  CALL DEFINE( _ROW_, "GRSEG",
    "work.candybarchart.salesbar");
  ENDCOMP;
RUN;
QUIT;

ODS HTML CLOSE;

```



Lauren Haworth, Genentech Inc.

(Reproduced from "Output Delivery System: The Basics")

Reliable and Readable Text for Web Graphics

[SAS 8] In the previous issue of *VIEWS News*, an ODS expert recommended use of the NOGTITLE option for the ODS HTML destination. Here, a graphics expert offers a different perspective.

Let's use the prior recommended code, but colour the pie:

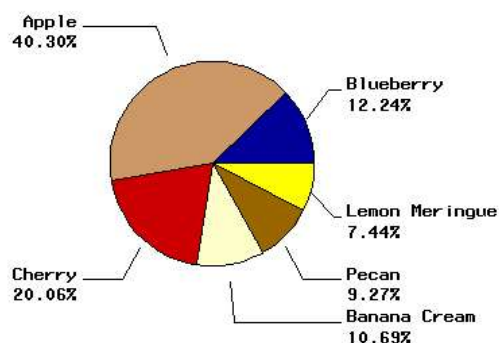
```
GOPTIONS DEVICE = GIF
      XPIXELS = 480 YPIXELS = 360;
PATTERN1 V = PSOLID C = CX000099;
PATTERN2 V = PSOLID C = CXcc9966;
PATTERN3 V = PSOLID C = CXcc0000;
PATTERN4 V = PSOLID C = CXffffcc;
PATTERN5 V = PSOLID C = CX996600;
PATTERN6 V = PSOLID C = CXffff00;

ODS HTML BODY = 'c:\VIEWS 25\PieStats1.htm'
      GPATH = 'c:\VIEWS 25\' (URL = NONE)
      NOGTITLE NOGFOOTNOTE;

TITLE 'Pie Chart: Market Shares by Flavor';
FOOTNOTE
'nogtitle nogfootnote + default graphic fonts';

PROC GCHART DATA = piestats;
  PIE pietype / SUMVAR = sales OTHER = 0
    MIDPOINTS = 'Blueberry' 'Apple' 'Cherry'
      'Banana Cream' 'Pecan' 'Lemon Meringue'
    VALUE = NONE PERCENT = ARROW SLICE = ARROW
    NOHEADING COUTLINE = CX000000;
RUN;
QUIT;
```

Pie Chart: Market Shares by Flavor

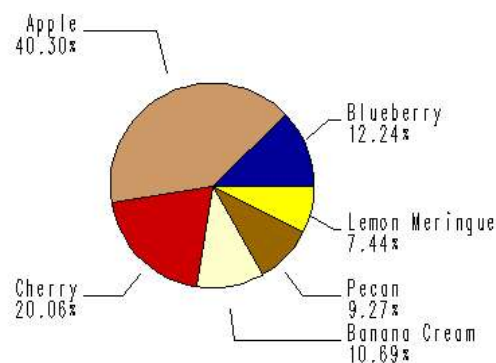


nogtitle nogfootnote + default graphic fonts

Note that four of the arrows that connect labels to slices are disconnected from their slices. Even if that software quirk is ignored as harmless, let's add one TITLE line to see what happens.

Although the code accepts the default graphic font for the pie slice labels, SAS/GRAPH (due to the ODS HTML NOGTITLE option) substitutes its SIMULATE font for the default font. The consequences are obviously undesirable. This substitution is done without any NOTE or WARNING message in the SAS log.

Pie Chart: Market Shares by Flavor second title line distorts the pie labels

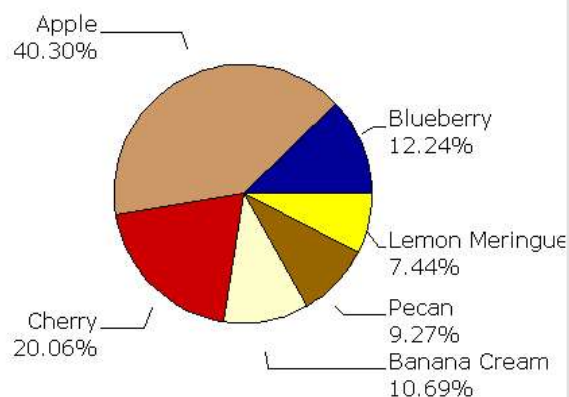


nogtitle nogfootnote

GOPTIONS FTEXT and HTEXT can be used to improve the pie slice labels, but they will also override the ODS Style font and size for TITLES and FOOTNOTES. When using SAS/GRAPH with ODS, graphic parameters can override the ODS Style. You should, therefore, put a GOPTIONS RESET=ALL statement before every ODS code block. A serif font is best for TITLES and FOOTNOTES, and a sans serif font is best for graph text and numbers. Using Matthew Carter's fonts designed for web readability, let's try this:

```
GOPTIONS FTEXT = 'Verdana' HTEXT = 12pt;
TITLE F = 'Georgia' H = 16pt
      'Pie Chart: Market Shares by Flavor';
TITLE2 F = 'Georgia' H = 16pt C = CXff0000
      'undesirable truncation of a slice label';
FOOTNOTE F = 'Georgia' H = 16pt
      'nogtitle nogfootnote + custom fonts';
```

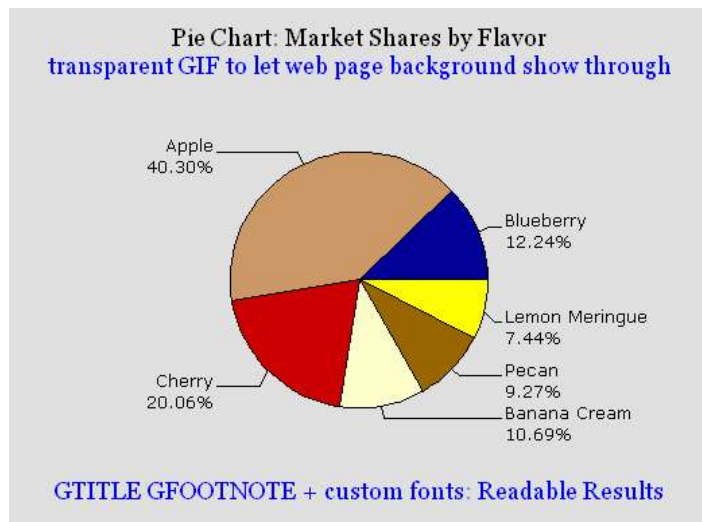
Pie Chart: Market Shares by Flavor undesirable truncation of a slice label



nogtitle nogfootnote + custom fonts

NOGTITLE and NOGFOOTNOTE force TITLES and FOOTNOTES out into the web page HTML code. All text in the HTML code generated for you by ODS is at risk: fonts in your ODS Style may not be available on the device that displays your web page. Also, the size of your text can be changed by the web page viewer's choice of text sizing, adjusted, in Internet Explorer, with View and Text Size. With GTITLE and GFOOTNOTE, when you define the font, its size, its weight, etc., inside the graph, SAS/GRAPH draws your text and imbeds it in the raster image GIF file. A web browser cannot change it. We can see what happens if we let SAS/GRAPH draw the TITLES and FOOTNOTE (and also create a transparent GIF) with these two code changes:

```
ODS HTML . . . GTITLE GFOOTNOTE;
GOPTIONS TRANSPARENCY;
```



LeRoy Bessler, Fortis

(In response to "Creating Standard Titles for Web Graphics" by Lauren Haworth, VIEWS News 24)

Ask The Consultant

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

Reading Empty Tables (2)

Q: How can you efficiently check if a dataset is empty?

A: Following on from the article in VIEWS News 24, here are a couple of others that I have used in the past using both SQL and %SYSFUNC:

```
DATA empty;
  SET sashelp.class (OBS = 0);
RUN;

* SQL method;

PROC SQL;
  SELECT COUNT(*) INTO :obscount
  FROM empty;
QUIT;

%PUT Number of Observations = &obscount;
```

```
* %SYSFUNC method;
```

```
%LET dsid = %SYSFUNC(OPEN(empty));
%LET obscount = %SYSFUNC(ATTRN(&dsid, NOBS));
%LET dsid = %SYSFUNC(CLOSE(&dsid));

%PUT Number of Observations = &obscount;
```

Andy York, Covance

(In response to "Reading Empty Tables" by Philip R Holland, VIEWS News 24)

Calling a SAS Program from VB.NET

Q: Why doesn't my VB.NET program communicate successfully with SAS?

A:[SAS 8] When building a VB.NET application, which needs to call various SAS programs via the SAS Integrated Object Model (IOM), problems will occur if the DCOM configuration settings are not set up correctly for your PC. The following settings are required:

Default Authentication level: **None**

Default Impersonation level: **Impersonate**

To access these settings, enter the following command in the Run window:

dcomcnfg

To test the connection, run the **itconfig.exe** file located in the following sub directory within the SAS root directory:

!sasroot\Shared Files\Integration Technologies

Amadeus Software Consultancy Team

Formats, Options, and Functions

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

The **NUMXw.d.** informat has been around since SAS version 6 and is useful for reading European numeric data, where a comma is used as the decimal separator, instead of the point.

The **CATALOG** engine for the **FILENAME** statement can be used provide temporary storage for text data which will be automatically deleted at the end of the SAS session. The following code demonstrates a possible use:

```
FILENAME text CATALOG 'work.cat';
DATA _null_;
  FILE text(code.source);
  PUT 'DATA _NULL_'; PUT "Hello World!"; RUN;
RUN;
%INCLUDE text(code.source) / SOURCE2;
```

CALL routines can be used directly with macro variables using the **%SYSCALL** statement. The following code demonstrates the use of **CALL RANUNI()** to generate random numbers, and the **%PUT** statement to write the random number values of the macro variables A and B to the SAS log.:

```
%let a = 123456;
%let b = 0;
%syscall ranuni(a,b);
%put &a, &b;
```

News

Call for Papers for VIEWS 2004 Conference

We're looking for people to present papers on all aspects of their work, at all levels. All abstracts must be received no later than **5 March 2004**. A PDF file containing a form for submitting your abstract can be downloaded from the *IEWS* web site at www.views-uk.org.

Please supply the following information with your abstract:

- Name
- Organisation
- Address
- Post Code
- Daytime Telephone Number
- E-mail
- Paper Title

Please indicate the stream appropriate for your paper:

- Pharmaceutical and statistics
- Tips and Techniques
- Data Warehousing
- Which Product?
- New Stuff
- Tutorials
- Web
- Business Strategies
- Applications Development
- Systems Architecture
- Base SAS
- The Output Delivery System
- Reporting
- Graphics
- Upgrade Experiences

Length of paper:

- 20 mins
- 40 mins
- Other

Abstract:

The 200 word abstract you provide with this form will be published in the *IEWS* Conference Programme. Fax or post your completed form to Louise Harvey, Amadeus Software Limited, Orchard Farm, Witney Lane, Leafield, Oxfordshire UK OX29 9PG. The fax number is +44-(0)1993-878042. Alternatively you can email the same information to abstracts@views-uk.org.

Final Paper Due:

If accepted, you should email your final paper, in Word or PowerPoint format, by **23 April 2004** to papers@views-uk.org. If you have any questions about the paper format, please call Louise Harvey on +44-(0)1993-878287.

Equipment:

An online projector and PC with PowerPoint are provided for every presentation. Additional equipment must be provided by the presenter.

The VIEWS Committee

In Brief

- Back issues of *IEWS News* are available from the *IEWS* web site.
- Please also note that members will now only receive notification of when the latest issue of *IEWS 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.
- 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.

February 2004

24 Independent Overview of SAS Products, Amadeus Software -FREE!

See the Amadeus Software web site for further details.

March 2004

25 Data Mining Techniques and Tools, Amadeus Software -FREE!

See the Amadeus Software web site for further details.

April 2004

28 Tricks of the Trade, Amadeus Software -FREE!

See the Amadeus Software web site for further details.

May 2004

IEWS 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.

19-20 **IEWS 2004 Conference**, Commonwealth Conference & Events Centre, Kensington, London

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

23-26 **PharmaSUG**, San Diego, USA

PharmaSUG is held each year and is the world-wide pharmaceutical SAS users group meeting.

June 2004

15-17 **SAS User Forum International**, Copenhagen, Denmark

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

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

See the Amadeus Software web site for further details.

July 2004

20 Reporting for Programmers with the SAS System,
Amadeus Software -FREE!
See the Amadeus Software web site for further details.

August 2004

VIEWS News 27th edition
17 Tricks of the Trade, Amadeus Software -FREE!
See the Amadeus Software web site for further details.

September 2004

28 Data Warehousing Explained, Amadeus Software
-FREE!
See the Amadeus Software web site for further details.

October 2004

**28 The Implementation of a Microsoft .NET & SAS System
Solution in a Day,** Amadeus Software -FREE!
See the Amadeus Software web site for further details.

November 2004

VIEWS News 28th edition
23 Changes and Enhancements to SAS Version 9, Amadeus
Software -FREE!
See the Amadeus Software web site for further details.

December 2004

**2 Changes and Enhancements to SAS Version 9 for the
Applied Staistician,** Amadeus Software -FREE!
See the Amadeus Software web site for further details.

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 event@views-uk.org, and don't forget to look at the web site for the latest news.

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***VIEWS News** is published quarterly by VIEWS - the UK's independent SAS user group. VIEWS is a not-for-profit organisation. Our Mission Statement and Rules can be viewed on our web site together with a list of current committee members.*