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# A Simple Way to Combine Graphs and Text - DSGI

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#### **ABSTRACT**

DSGI combines the SAS/Graph procedures of GSLIDE, GREPLAY, and annotate facility to create or add features (includes graphs and text reports) to an existing graph generated by a SAS procedure. Using PROC GPRINT to transport text file into graph file, DSGI can combine these existing graphs and text together in one output. It is an easy way to mingle graphs and text reports together using one data step.

#### INTRODUCTION

Viewports and Windows can be defined on DSGI. Viewports enable you to subdivide the graphics output area and insert existing graphs or draw graphics elements in smaller sections of the graphics output area. Windows define the coordinate system within a viewport and enable you to scale the graph or graphics elements drawn within the viewport.

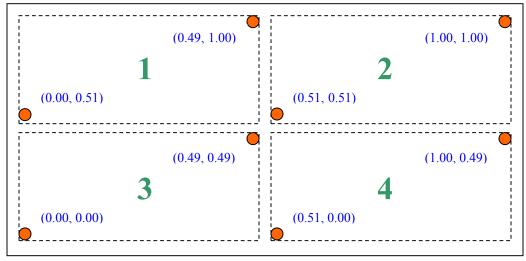
This chart shows how the graph output area is divided into four logical transformations:

```
DSGI=gset('viewport', 1, 0.00, 0.51, 0.49, 1.00);

DSGI=gset('viewport', 2, 0.51, 0.51, 1.00, 1.00);

DSGI=gset('viewport', 3, 0.00, 0.00, 0.49, 0.49);

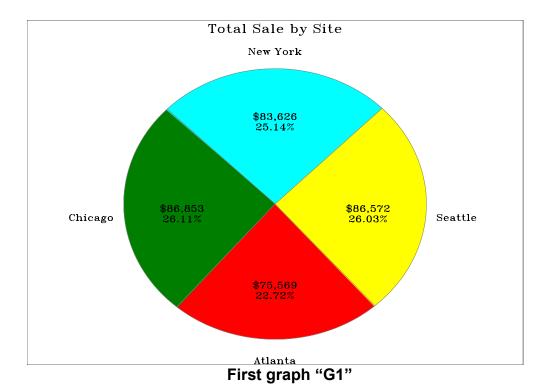
DSGI=gset('viewport', 4, 0.51, 0.00, 1.00, 0.49);
```



## PREPARE THE GRAPHS AND REPORT

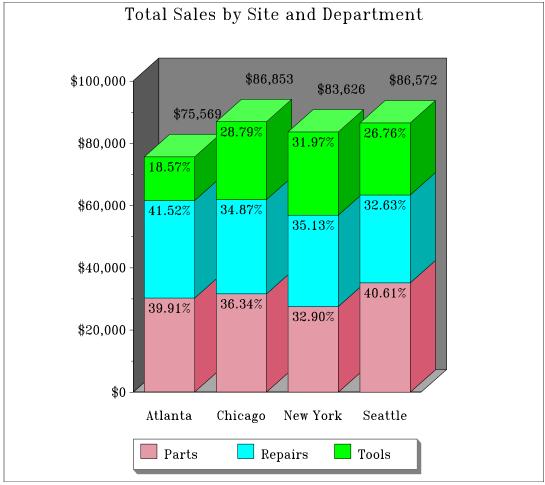
## 1. Code for generating first graph

```
title "Total Sale by Site";
footnote;
   /* generate pie chart from TOTALS */
   /* and create catalog entry PIE
pattern1 value=solid color=cyan;
pattern2 value=solid color=green;
pattern3 value=solid color=red;
pattern4 value=solid color=yellow;
proc gchart data=totals ;
   format sales dollar8.;
   pie site
       / type=sum
         sumvar=sales
         midpoints='New York' 'Chicago' 'Atlanta' 'Seattle'
         fill=solid
         coutline=gray
         angle=45
                             Name the graph for
         percent=inside
         value=inside
                             DSGI to insert
         slice=outside
         noheading
         name='G1'
         ;
run;
```



2. Code for generating second graph:

```
title1 'Total Sales by Site and Department';
footnote;
axis1 label=none origin=(24,);
axis2 label=none order=(0 to 100000 by 20000)
      minor=(number=1)offset=(,0);
legend1 label=none shape=bar(3,3) cborder=black
        cblock=gray origin=(24,);
pattern1 color=lipk; pattern2 color=cyan;
pattern3 color=lime;
goptions hpos=75 vpos=30;
  proc gchart data=totals;
   format sales dollar8.;
   vbar3d site / sumvar=sales subgroup=dept
                 inside=subpct
                 outside=sum
                 width=7 space=3
                 maxis=axis1 raxis=axis2
                 cframe=gray coutline=black
                 legend=legend1
                                      Name the graph
                 name='G2';
                                      for DSGI to insert
run;
```



Second graph "G2"

- 3. Code for generating third graph (from a text file):
  - a. Create the report (text):

```
filename tot 'tot.doc';
proc printto print=tot new;
run;
title;
footnote;
options linesize=64 pagesize=37 byline;
proc report data=tot2 split='\' center missing nowindows
            headline spacing=1;
column site dept tot;
define site / order order=data width=8 left flow "Site";
define dept
              / display width=13 left "Department";
define tot
              / display width=11 left " Sales"
               format= dollar11.2;
break before site/skip;
run;
proc printto;
run;
```

# b. Transport to graphics file

```
title j=l ' Summary of Sales by Site and Department';
footnote;
goptions hpos=40 vpos=28 htext=3.5 ftext=swissx;

proc gprint fileref=tot name='G3';
run;
Name the graph for
DSGI to insert
```

# Result of "G3":

J	Department	Sales
Atlanta	Parts	\$30,162.65
	Repairs	\$31,376.46
	Tools	\$14,029.73
	Subtotal:	\$75,568.84
Chicago	Parts	\$31,557.99
	Repairs	\$30,288.20
	Tools	\$25,006.48
	Subtotal:	\$86,852.66
New Yor	k Parts	\$27,512.11
	Repairs	\$29,376.25
	Tools	\$26,738.03
	Subtotal:	\$83,626.40
Seattle	Parts	\$35,153.18
	Repairs	\$28,248.80
	Tools	\$23,170.12
	Subtotal:	\$86,572.09
		400,000

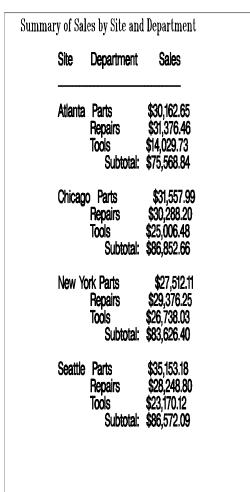
# 4. Combine the graphs together:

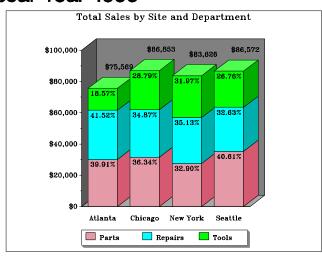
#### DSGI Code:

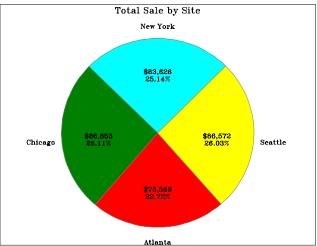
```
goptions htitle=4.5 display noborder;
title1 'XYZ Corporation Annual Earnings';
title2 'Fiscal Year 1999';
footnote;
options orientation=portrait topmargin=1
        bottommargin=1 leftmargin=1 rightmargin=1;
ods listing close;
ods rtf file="&progname..rtf";
data _null_;
      /* prepare SAS/GRAPH software */
      /* to accept DSGI statements */
  rc=ginit();
   rc=graph('clear');
      /* insert graph previously created ***Pie***/
  rc=gset('viewport', 1, .42, 0, .90, .49);
  rc=gset('window', 1, 0, 0, 100, 100);
  rc=gset('transno', 1);
  rc=graph('insert', 'G1');
      /* insert graph previously created ***Plot***/
  rc=gset('viewport', 2, .42, .51, .90, 1);
  rc=gset('window', 2, 0, 0, 100, 100);
  rc=gset('transno', 2);
  rc=graph('insert', 'G2');
      /* insert text previously created ***Table***/
  rc=gset('viewport', 3, 0, 0, .40, 1);
  rc=gset('window', 3, 0, 0, 100, 100);
  rc=gset('transno', 3);
  rc=graph('insert', 'G3');
      /* display graph and end DSGI */
  rc=graph('update');
  rc=gterm();
run;
ods rtf close;
ods listing;
```

# XYZ Corporation Annual Earnings

# Fiscal Year 1999







# (Combination of All Graphs and Text)

#### CONCLUSION

DSGI provides many of the same features as the Annotate facility and GSLIDE procedure, but it much faster and less complex than Annotate, GSLIDE and GREPLAY. DSGI supports viewports and windows, which enable you to specify the dimensions, position, and scale of the graphics output. Additionally DSGI also allow you to include multiple graphs in the same graphics output.

### **REFERENCES**

SAS Institute Inc., "SAS/GRAPH Software: Reference". *SAS OnLineDoc*<sub>®</sub> 8.2. SAS Institute Inc., Cary, NC. (url: <a href="http://v8doc.sas.com/sashtml/">http://v8doc.sas.com/sashtml/</a>)

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