

The Dynamic Duo: ODS Layout and the ODS Destination for PowerPoint

About the Presenter

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The Dynamic Duo: ODS Layout and the ODS Destination for PowerPoint

Jane Eslinger, SAS Institute Inc.

#SASGF



Today's Lineup



Game Plan



Playing the Game



Final Stretch



Game Plan: Understanding Default Behavior



Objects accumulate before being sent to PowerPoint

- Might place titles and footnotes unexpectedly



Layout container size varies

- Might span multiple slides
- Might fill just a portion of one slide



Game Plan: Triggering a New Slide

- 🏈 Fill the entire slide
- 🏈 Use a DATA _NULL_ step **9.4TS1M3 (and earlier)**

```
ods layout gridded;  
  proc print;  
  run;  
ods layout end;
```

```
data _null_;  
  dcl odsout obj();  
run;
```

```
ods layout gridded;  
  proc sgplot;  
  run;  
ods layout end;
```



Game Plan: Triggering a New Slide

- 🏈 Fill the entire slide
- 🏈 Use a DATA _NULL_ step **9.4TS1M4 (and later)**

```
ods layout gridded;  
  proc print;  
  run;  
ods layout end;
```

```
ods powerpoint startpage=now;
```

```
ods layout gridded;  
  proc sgplot;  
  run;  
ods layout end;
```



Game Plan: Setting Output Object Size



Graph Size

- Set size in GOPTIONS statement
- Set size in ODS GRAPHICS statement
- Change axis labels and legend



Table Size

- Choose best procedure: REPORT, MEANS, TABULATE
- Use multiple tables in slide
- Remove header rows or change labels



Playing the Game: Graphs in 2x2 Pattern

```
proc sort data=sashelp.baseball  
        out=baseball;  
        by league division;  
run;
```



Playing the Game: Graphs in 2x2 Pattern

Using the ODS LAYOUT GRIDDED ROWS= option

```
ods powerpoint file='twobytwo1.pptx'  
              nogtitle nogfootnote;  
title 'Graphs in a 2x2 Pattern';  
ods graphics on / height=2.25in width=3in;  
ods layout gridded columns=2 rows=2  
              advance=bygroup;  
ods region;
```



Playing the Game: Graphs in 2x2 Pattern

Using the ODS LAYOUT GRIDDED ROWS= option

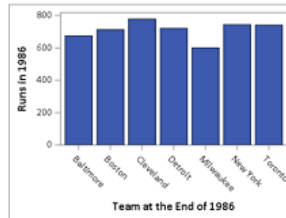
```
proc sgplot data=baseball;  
  by league division;  
  vbar team / response=nruns;  
  label league='League'  
         division='Division';  
  
run;  
  
ods layout end;  
  
ods powerpoint close;
```



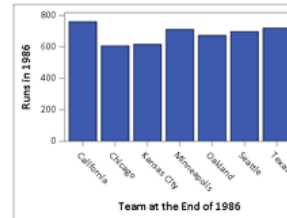
Playing the Game: ODS LAYOUT ROWS=

Graphs in a 2x2 Pattern

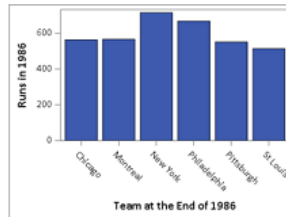
League=American Division=East



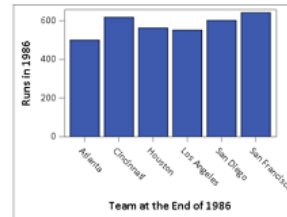
League=American Division=West



League=National Division=East



League=National Division=West



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Playing the Game: Graphs in 2x2 Pattern

Using the ODS REGION HEIGHT= option

```
ods powerpoint file='twobytwo2.pptx'  
              nogtitle nogfootnote;  
title 'Graphs in a 2x2 Pattern';  
ods graphics on / height=2.25in width=3in;  
ods layout gridded columns=2  
              advance=bygroup;  
ods region height=47%;
```



Playing the Game: Graphs in 2x2 Pattern

Using the ODS REGION HEIGHT= option

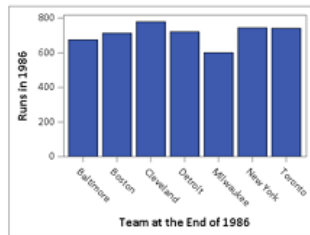
```
proc sgplot data=baseball;  
  by league division;  
  vbar team / response=nruns;  
  label league='League'  
         division='Division';  
  
run;  
  
ods layout end;  
  
ods powerpoint close;
```



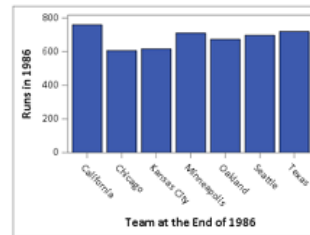
Playing the Game: ODS REGION HEIGHT=

Graphs in a 2x2 Pattern

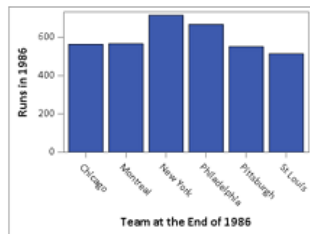
League=American Division=East



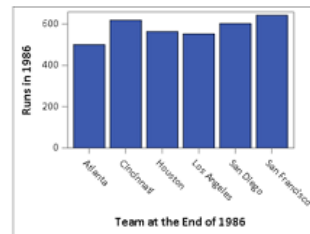
League=American Division=West



League=National Division=East



League=National Division=West



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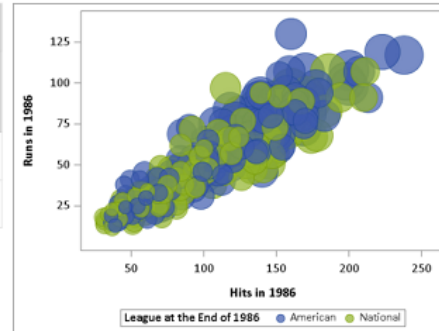
Playing the Game: Multiple Containers

Multiple Layout Containers One Slide

Table Shows Total Runs and Hits for Each League

The Graph Contains One Bubble for Each Player. The Size of Each Bubble Represents the Magnitude of the RBIs.

	Totals	
	Runs in 1986	Hits in 1986
American	9,761	18,845
National	7,053	14,449



1



Playing the Game: Multiple Containers

```
ods layout gridded rows=1 columns=1;

ods region;
proc odstext;
  p 'Table Shows Total Runs and Hits for
    Each League';
  p 'The Graph Contains One Bubble for Each
    Player. The Size of Each Bubble
    Represents the Magnitude of the RBIs.';
run;
ods layout end;
```



Playing the Game: Multiple Containers

```
ods layout gridded columns=2
  column_widths=(47% 47%) column_gutter=1pct;
ods region;
  proc tabulate data=sashelp.baseball;
    class league;
    var nruns nhits nrbi;
    tables league='',
      sum='Totals'*(nruns nhits)*f=comma12.;
  run;
```



Playing the Game: Multiple Containers

```
ods region;  
  proc sgplot data=sashelp.baseball;  
    bubble x=nhits y=nruns size=nrbi/  
          group=league transparency=.3;  
  run;  
ods layout end;
```



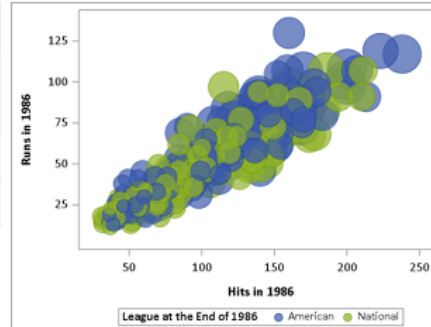
Playing the Game: Multiple Containers

Multiple Layout Containers One Slide

Table Shows Total Runs and Hits for Each League

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	Totals	
	Runs in 1986	Hits in 1986
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Final Stretch

- ⚾ Predefined Layouts
 - Are specified in ODS POWERPOINT LAYOUT= option
 - Are not the same as an ODS LAYOUT
 - Do not use on the same slide as ODS LAYOUT

- ⚾ Possible Values
 - TitleSlide
 - TitleAndContent
 - TwoContent



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