

Reporting: Moving from v6 to v8 with ODS

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Abstract

This paper observes the transition of several reports used by R&D Management at SAS Institute from their Version 6 incarnation through several rounds of improvement. Along the way, we point out some techniques that can be used to make reports delivered “on the Web” more effective.

We show how we used the new ODS features in Base SAS® Software together with SAS/Graph® and SAS/IntrNet™ software to modernize reports from the bug-reporting application used by many developers at SAS Institute. When we were finished, we had transformed lumpy mono-spaced batch printout into vibrant web pages with clickable graphs and reports. Building links to other applications like “up to the minute detail reports” further enhanced the utility of these new HTML pages. The paper is a cookbook of examples for something that you can try at your place of business too.

Complete Paper Location

This material is presented more effectively as a series of examples that build upon the previous one. Unfortunately this exceeds the conference guidelines for publication in the conference proceedings.

The complete paper is published at <http://www.sas.com/rnd/base/topics/v6v8ods/index.html>

To whet your appetite and encourage you to visit, we have included the “before” and “after” pictures from two of the reports.

Your Turn

The developers, testers and documentation folk that bring you ODS are very excited about the potential of these new capabilities of the SAS® System. You can send us electronic mail to ods@unx.sas.com with your comments, or to request a copy of the example HTML files.

We hope to add more information about the ODS capabilities in future releases of SAS Software to the Research and Development section of SAS Institute's Web Page. See <http://www.sas.com/rnd>

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Outstanding Defects... [Before]

The defect listing was printed grouped by "owner", and sent via email. It was hard to gauge how often to send this email, and there was no easy way to access a "top level view". A post-processing step would separate the listing file by owner and email the relevant lines to each person.

Output - (Untitled)			
IPD Bugs...			
support=CHURCH, L.			
Obs	defectid	component	defect
1	S0006934	ENG.PRO	PROC FSVIEW WITH SQL VIEW IN ADD MODE => DISPLAY
2	S0015777	ENG.PRO	PROC FSEDIT WITH SQL VIEW OUT-OF-SYNC WITH BOTTOM
3	D0005421	SQL	SIMPLE WHERE CLAUSE IS NOT PASSED TO THE DB2 DATA
4	D0133010	SQL	TWO FSEDITS OF THE SAME VIEW ACTS SCREWY
5	D0003241	SQL	ALTER TABLE DOESNT PRESERVE CONSTRAINTS
6	S0009577	WIN	TEST HANGS WHEN SET NULL DATA SET ACROSS SERVER 1
support=GEBHART, E.			
Obs	defectid	component	defect
7	S0018353	ODS.HTML	ODS OUTPUT TO CATALOG ENTRIES
8	S0010105	ODS.HTML	NEED A TEMPLATE OPTION TO SPECIFY A SUB-GRID FOR
9	S0019802	ODS.HTML	TEXT DOES NOT FLOW PROPERLY WITHIN TABLE COLUMNS
10	S0011778	ODS.HTML	COMBINATION OF ANCHOR= NEWFILE= AND MODIFY NEED I
support=KENT, P.			
Obs	defectid	component	defect
11	S0017627	ODS	ODS STYLE CHANGES.
12	D0029436	PRINT	TOTALS NOT ALIGNED CORRECTLY WHEN USING CERTAIN
13	D0044714	PRINT	PROC PRINT ABENDS WITH BY AND ID AND SUM STATEME
14	D0066186	PRINT	UNIFORM OPTION CAUSES SUMS TO BE PRINTED ON A SE
15	S0007716	DM.RESULTS	BY STATEMENT NOT LISTING INDIVIDUAL BY GROUPS IN
16	S0012108	ODS.HTML	GPATH OPTION NOT HONORING FILEREF
17	D0009530	PRINT	PROC PRINT NOT ALIGNING DECIMAL PLACES BY DEFAULT
18	D0018755	PRINT	PROC PRINT RESERVES TOO MUCH SPACE AT THE BOTTOM
19	D0032628	PRINT	WIDTH=MIN HAS NO EFFECT WHEN AN ID VARIABLE IS F
20	D0036007	PRINT	PROC PRINT BREAKS OUTPUT DIFFERENTLY THAN IN PRE
21	D0040086	PRINT	CRASH WHEN NOBYLINE HEADING=VERTICAL AND WIDTH=L
22	D0045966	PRINT	DUPLICATE PAGE WITH DUPLICATE PROCESSING DOESN'T TRY TO RENE

Outstanding Defects... [After]

A top level bar-chart presented in an HTML browser shows a summary of each persons defects [This is the bottom-most window in this screen snap]. The bars are “hot” in that when you click on them, you get transported to the listing of defects for that person.

This listing [the middle window in the screen snap] shows the common look and feel that can be attained using ODS styles, but also harks back to days of old when printouts were shaded alternately ☺. Parts of this report are “live” too – click on the defect number and you’ll get transported to the detail for any particular defect.

A third level of drill down [the top window in the screen snap] allows you to interact with the specifics of any single defect – in fact this links you to the MIS supported operational system for the defect in question.

The screenshot displays a web application interface for tracking defects. It consists of three main windows:

- Top Window:** Shows a bar chart titled "Base SAS Software" with a pink flamingo logo. The chart displays the number of defects for various users: KENT, P. (79), IPD, support, KENT, P., MCNEILL, S., OLINGER, C., CHURCH, L., WHEELER, M., and RAY, R. The bar for KENT, P. is highlighted in red.
- Middle Window:** Displays a list of defects for "28JUN99 -- bugs for KENT, P.". The list includes columns for Priority, Component, Defect, and Description. The defects are as follows:

Priority	Component	Defect	Description
High	ODS	S0017627	ODS STYLE CHANGES.
	PRINT	D0029436	TOTALS NOT ALIGNED CORRECTLY WHEN USING CERTAIN PAGESIZES
		D0044714	PROC PRINT ABENDS WITH BY AND ID AND SUM STATEMENTS
		D0066186	UNIFORM OPTION CAUSES SUMS TO BE PRINTED ON A SEPARATE PAGE
	DM.RESULTS	S0007716	BY STATEMENT NOT LISTING INDIVIDUAL BY GROUPS IN RESULTS WINDOW
	ODS.HTML	S0012108	GPATH OPTION NOT HONORING FILEREF
	PRINT	Q0009530	PROC PRINT NOT ALIGNING DECIMAL PLACES BY DEFAULT
		D0018755	PROC PRINT RESERVES TOO MUCH SPACE AT THE BOTTOM OF THE PAGE
		D0032628	WIDTH=MIN HAS NO EFFECT WHEN AN ID VARIABLE IS FORMATTED
		D0036007	PROC PRINT BREAKS OUTPUT DIFFERENTLY THAN IN PREVIOUS RELEASES
		D0040086	CRASH WHEN NOBYLINE HEADING=VERTICAL AND WIDTH=UNIFORM: PS=15 LS=132
- Bottom Window:** Provides a detailed history and details for the defect S0017627. The history table shows the following entries:

Date	Status	Location	Reporter
21MAY98:13:19	OPEN	7.01:DEV	KENT, P., IPD
21MAY98:13:19	REQUEST(S)	7.01:DEV	KENT, P., IPD
21MAY98:14:27	APPROVE(S)	7.01:DEV	GOODLING, N., QAM
18JUN98:23:32	FIXED	7.01:DEV	KENT, P., IPD

The details section includes a description of the defect and a link to the HTML changes.

Defect Rates... [Before]

Managers are concerned with how well we are keeping up with the defects – during a good week more defects will be fixed than are reported. We keep on top of this with a PROC TABULATE report that details the flow rate by individual.

This report would also be distributed via email [not as the screen dump of the SAS Output Window as shown here]. It was never completely useful – the weekly total was always off to the right and the vagaries of email and text wrapping often conspired to scramble the report before your very eyes.

Output - (Untitled)														
IPD Bug Rates														
	01APR99			02APR99			05APR99			06APR99			rt	
	rep	fix	net	rep	fix	net	rep	fix	net	rep	fix	net		
All	3	-8	-5	8	-6	2	5	-7	-2	5	-8	-3		
person														
Bill Heffner	0	-2	-2	1	0	1	1	-3	-2	0	-1	-1		
Brian Schellenberger	1	-2	-1	2	-2	0	1	0	1	0	0	0		
Chris Olinger	1	-2	-1	3	-3	0	2	-2	0	0	0	0		
Dan O'Connor	1	0	1	0	-1	-1	0	0	0	0	0	0		
Jason Secosky	0	-1	-1	0	0	0	1	0	1	0	-1	-1		
Lewis Church	0	-1	-1	2	0	2	0	-2	-2	4	0	4		
Paul Kent	0	0	0	0	0	0	0	0	0	0	0	0		
Robert Ray	0	0	0	0	0	0	0	0	0	0	-4	-4		
Sandy McNeill	0	0	0	0	0	0	0	0	0	1	-2	-1		

Defect Rates... [After]

The bug flow report is now available as a web page, and is structured so that one can drill from the “all of R&D” perspective down to an individual department.

The weekly number is more useful than the daily flows so the report columns have been inverted – on the web it seems that the prime real estate is Top Left!

The numbers have been traffic-lighted – “green means good” – and on good days when the report looks “all green” one does not even have to read the actual numbers to get a sense of relief! [Days with no activity are not that important to the message of this report, so the “zeroes” have been faded out]

Results Viewer - rate6.htm

Base SAS Software

Base SAS Bugs...

	Week			08APR99			07APR99			06APR99			05APR99		
	rep	fix	net	rep	fix	net	rep	fix	net	rep	fix	net	rep	fix	net
All	31	-34	-3	6	-2	4	4	-3	1	5	-8	-3	5		
person															
Bill Heffner	4	-6	-2				2		2		-1	-1	1		
Brian Schellenberger	6	-4	2				2		2				1		
Chris Olinger	7	-8	-1	1	-1								2		
Dan O'Connor	1	-3	-2					-2	-2						
Jason Secosky	1	-3	-2					-1	-1		-1	-1	1		
Lewis Church	6	-3	3							4		4			
Paul Kent	3		3	3		3									
Robert Ray	2	-5	-3	2	-1	1					-4	-4			
Sandy McNeill	1	-2	-1							1	-2	-1			