



Saskatchewan SAS User Group

30APR2009

What's new in SAS 9.2

Sylvain Tremblay

SAS Canada – Education

**THE
POWER
TO KNOW.**

New release of SAS: 9.2

 **SAS GLOBAL FORUM 2008 SAN ANTONIO TEXAS**
March 16-19
Warren E. Stinson, Conference Chair

SAS Foundation:

BASE
STAT

...

 **SAS GLOBAL FORUM 2009** Washington, D.C.
March 22-25
Lori Griffin, Conference Chair

Tools & Solutions

Enterprise Guide 4.2
Enterprise Miner 6.1

...

Agenda

- SAS 9.2 Key Highlights
- Proc SORT
- PDF Output
- ODS Graphics Editor
- SAS/GRAPH – new Procs
- Proc FCMP
- Conclusion / Questions

Universal Printing

- PNG (Portable Network Graphics)
- SVG (Scalable Vector Graphics)
- PDF/A (Archivable PDF documents)

National Language Support

- Additional international informats and formats
- Linguistic collation for sorting

Internet Protocol

- The new IPv6 is supported

Key Highlights

Performance

- Resume batch jobs exactly where they stopped
- Proc SQL has been optimized for queries to external DBMS

Security

- The AES (Advanced Encryption Standard) is supported

Diagnostics

- New SCAPROC Proc (SAS Code Analyzer)
- New JAVAINFO Proc

Key Highlights

User Defined Functions

- New PROTO Proc - create new functions in C, C++
- New FCMP Proc - create new functions in SAS

ODS Statistical Graphics

- Now embedded in 50+ Procs
- ODS Graphics Editor - GUI

SAS/Graph

- New Statistical Graphics (SG) Procedures
- Graph Template Language (GTL) to customize graphics

1 - Proc SORT

uppercase and lowercase letters are **sorted based on their internal storage representation**, NOT their position in the alphabet.

ASCII encoding: **uppercase Z precedes lowercase a**
(Windows, UNIX)

 **Sorting mixed case will be problematic!**

SAS 9.2 solution: SORTSEQ = LINGUISTIC option

- Sorts based on the language rules for the current locale setting

ASCII collating sequence

- UNIX, Windows & OpenVMS

- English-language ASCII sequence:

blank ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 :
; < = > ? @ A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z [\] ^ _ a b c d e f g h i j k l m n o p
q r s t u v w x y z { } ~

- Digits are sorted before uppercase letters
Uppercase letters are sorted before lowercase

Option STRENGTH=

- | | | |
|-----------|-----------|-------|
| ■ Primary | “a” < “b” | order |
|-----------|-----------|-------|

- | | | |
|-------------|--------------------|---------|
| ■ Secondary | “as” < “às” < “at” | accents |
|-------------|--------------------|---------|

- | | | |
|------------|--------------------|-----------|
| ■ Tertiary | “ao” < “Ao” < “aò” | uppercase |
|------------|--------------------|-----------|

- | | | |
|--------------|---------------------|-------------|
| ■ Quaternary | “ab” < “a-b” < “aB” | punctuation |
|--------------|---------------------|-------------|

- | | | |
|-------------|-------------|------------|
| ■ Identical | specialized | ex: Hebrew |
|-------------|-------------|------------|

2 - PDF Output

The PDF destination of ODS is great, but the documents it produces **aren't secured!**

SAS 9.2 Solution: **New Systems Options**

- **PDFSECURITY**

 - encrypt your PDF output

 - two levels: 40-bit (low) and 128-bit (high)

- **PDFPASSWORD**

 - User password - used to open an encrypted PDF document

 - Owner password - used to validate the owner

3 - SAS/Graph

It's a tedious task to make **minor changes to the graphs!**

SAS 9.2 solution: ODS Graphics Editor:
Interactive GUI to make changes easy

- No more complex coding with the Graph Template Language (GTL)
- Edit, add or delete title and footnotes
- Reposition the legends
- Customize the visual properties of plots and axes
- Add free-form annotation
- Save and export the graphic

4 – SAS/GRAPH : new Statistical Graphics Procs

ODS Statistical Graphics are nice but don't you wish you had more choices for **exploratory data analysis** and for producing **customized graphs** ?

SAS 9.2 Solution: New SAS/GRAPH Procedures

- Proc SGPANEL
- Proc SGPLOT
- Proc SGSCATTER
- Proc SGRENDER

5 – Proc FCMP : User defined functions

Encapsulating business logic in a SAS Macro is not always easy and could **add to the complexity** of your code.

SAS 9.2 Solution: User defined functions

- Simplify your code
- Avoid abusing Macros
- Call them from a Data Step and certain Procs

In summary,

- PDF Output
- Proc SORT
- ODS Graphics Editor
- SAS/GRAPH – new Procs
- Proc FCMP

To learn more

What's new SAS 9.2

<http://support.sas.com/documentation/whatsnew/index.html>

SAS 9.2 Technical Documentation

<http://support.sas.com/cdlsearch?ct=80000>



New Courses for SAS 9.2

<http://support.sas.com/training/canada/curric.html>

Questions?



THE
POWER
TO KNOW®

Thanks!

Sylvain Tremblay
sylvain.tremblay@sas.com