

SAS® Packages State of the Union

Bartosz Jabłoński
SID 13 - November 10th, 2022



www.polsug.com
#PolSUG

- Comprehensive T_EX Archive Network
<https://ctan.org/pkg/>
- Comprehensive R Archive Network
<https://cran.r-project.org>
- Python Package Index
<https://pypi.org/>
- Why not in SAS?



SAS package¹

A **SAS package** is an automatically generated, single, stand alone zip file containing organised and ordered code structures, created by the developer and extended with additional automatically generated "driving" files (i.e. description, metadata, load, unload, and help files).

The purpose of a package is to be a simple, and easy to access, code sharing medium, which allows: on the one hand, to separate the code complex dependencies created by the developer from the user experience with the final product and, on the other hand, reduce developers and users unnecessary frustration related to a remote deployment process.

¹ The idea presented here should not be confused with other occurrences of "package" concept which can be found in the SAS ecosystem e.g., Proc DS2 packages, SAS/IML, packages, SAS ODS packages, SAS Integration Technologies Publishing Framework packages, or event an Enterprise Guide *.egp file.

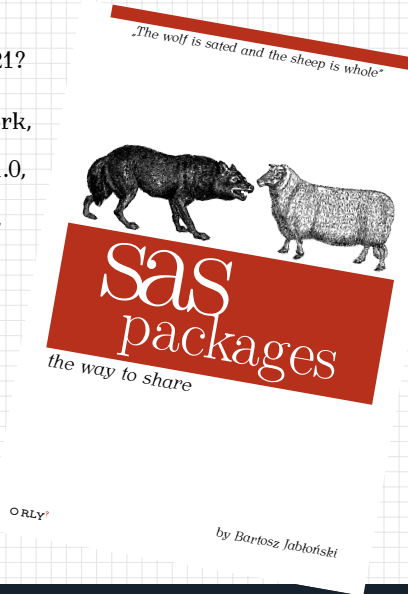
SAS Packages Framework

SAS Packages Framework (or, for short, SPF) is a "pack" of macros, which allows to use and to *develop* SAS packages.

```
1 %listPackages(),  
2 %installPackage(),  
3 %verifyPackage(),  
4 %helpPackage(),  
5 %previewPackage(),  
6 %loadPackage(),  
7 %loadPackageS(),  
8 %unloadPackage(),  
9 %extendPackagesFileref(),  
  and  
10 %generatePackage().
```

What happened since November 11th 2021?

- Eleven new releases of the framework,
- the MacroArray package grown to 1.0,
- the BasePlus package grown to 1.17,
- the GSM package grown to 0.20,
- and SASPAC.



Birthday

```
$ git log e6f06d7  
commit e6f06d7b716746456e9692aa356a1d725c72ec71  
Author: yabwon <yabwon@gmail.com>  
Date: Sun Oct 13 10:50:44 2019 +0200  
    Initial commit
```

MacroArray(1.0)

- %sortMacroArray()
- %mcHashTable()
- %mcDictionary()

MacroArray(1.0)

- %sortMacroArray()
- %mcHashTable()
- %mcDictionary()

BasePlus(1.17)

- %zipLibrary()
- %unzipLibrary()
- %LDSN()
- %LDSNM()
- %LVarNm()
- %LVarNmLab()
- bug fixes

MacroArray(1.0)

- %sortMacroArray()
- %mcHashTable()
- %mcDictionary()

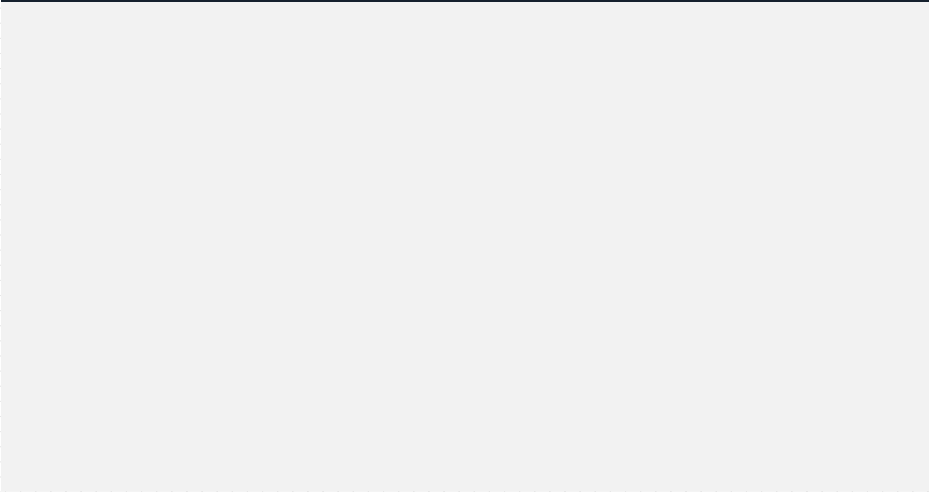
BasePlus(1.17)

- %zipLibrary()
- %unzipLibrary()
- %LDSN()
- %LDSNM()
- %LVarNm()
- %LVarNmLab()
- bug fixes

GSM(0.20)

- re-factoring
- bug fixes
- additional checks
- new parameters

SAS Packages Framework (20221107)



SAS Packages Framework (20221107)

- Bug fixes.

SAS Packages Framework (20221107)

- Bug fixes.
- Each macro of the framework in a separate *.sas file (./SPF/Macros)

SAS Packages Framework (20221107)

- Bug fixes.
- Each macro of the framework in a separate *.sas file (./SPF/Macros)
- %extendPackagesFileref() and packages fileref with multiple directories

SAS Packages Framework (20221107)

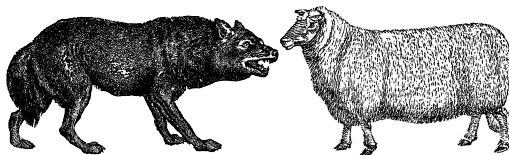
- Bug fixes.
- Each macro of the framework in a separate *.sas file (./SPF/Macros)
- %extendPackagesFileref() and packages fileref with multiple directories
- The %generatePackage() macro:
 - ▶ Checks for driving files existence
 - ▶ Checks for "required" lists
 - ▶ New parameter delTestWork=
 - ▶ Log aesthetics and readability improved
 - ▶ Update in setting a package version (major.minor.patch)
 - ▶ Quality checks for files of exec and clean types
 - ▶ Documentation updated

SAS Packages Framework (20221107)

- Bug fixes.
- Each macro of the framework in a separate *.sas file (./SPF/Macros)
- %extendPackagesFileref() and packages fileref with multiple directories
- The %generatePackage() macro:
 - ▶ Checks for driving files existence
 - ▶ Checks for "required" lists
 - ▶ New parameter delTestWork=
 - ▶ Log aesthetics and readability improved
 - ▶ Update in setting a package version (major.minor.patch)
 - ▶ Quality checks for files of exec and clean types
 - ▶ Documentation updated
- The %installPackage() macro:
 - ▶ New parameter mirror= added
 - ▶ New parameter version= added
 - ▶ %installPackage(BasePlus(1.17) MacroArray(1.0) GSM)

„The wolf is sated and the sheep is whole”

github.com/yabwon/SAS_PACKAGES

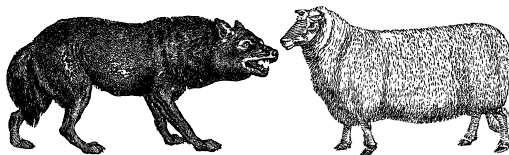


sas
packages

the way to share

„The wolf is sated and the sheep is whole”

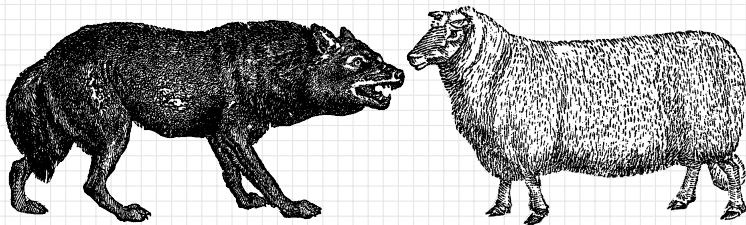
github.com/SASPAC



sas
packages

the way to share

The User & The Developer



thank you

✉ yabwon  gmail.com

- Bartosz Jabłoński, SAS Packages Framework, at:
https://github.com/yabwon/SAS_PACKAGES
- Bartosz Jabłoński, "My First SAS Package - a How To",
to be published in SAS Global Forum 2021 Proceedings, 1079-2021
available at:
<https://communities.sas.com/t5/SAS-Global-Forum-Proceedings/My-First-SAS-Package-A-How-To/ta-p/726319>
https://github.com/yabwon/SAS_PACKAGES/blob/main/SPF/Documentation
- Bartosz Jabłoński, "SAS Packages: The Way to Share (a How To)",
SAS Global Forum 2020 Proceedings, 4725-2020
<https://www.sas.com/content/dam/SAS/support/en/sas-global-forum-proceedings/2020/4725-2020.pdf>
extended version available at:
https://github.com/yabwon/SAS_PACKAGES/blob/main/SPF/Documentation
- The wolf and sheep are from *ClipArt ETC* archive, <https://etc.usf.edu/clipart/>