



Geert Verbeke (L) & Geert Molenberghs (R)

WIN-WIN COLLABORATION WITH RENOWNED PROFESSORS

SAS was one of the first companies to market a software package based on advanced statistics. Since then, the company has continued to integrate statistical procedures into its software. How do they do it? According to world-renowned Belgian statistics professors and researchers Geert Verbeke and Geert Molenberghs, SAS developers not only excel at writing code; they thoroughly understand statistics as well.

SAS DEVELOPERS FEEL AT HOME IN THE WORLD OF ADVANCED STATISTICS

Industry

Impacting all industries, but particularly universities, pharmaceutical and biomedical companies, national authorities.

Business Issue

Supporting research, teaching, and consultancy services with state-of-the-art statistical procedures.

Solution

Close collaboration between SAS developers and Professors-Researchers results in SAS Analytics being the most comprehensive and stable statistics-based software on the market

(Specific procedures include PROC MIXED, PROC NL MIXED)

Benefits

1. Frontier technology: SAS incorporates all recent trends in statistical procedures.
2. Users have impact on the development of procedures and the generated output.
3. Multiple applications: the SAS statistics-based software can be used in various domains and enables cross-discipline collaboration.
4. Openness: users can develop their own macros, facilitating research efforts.

In the beginning, there was ... SAS

SAS was a pioneer in statistics-based software. Prof. Dr. Geert Verbeke and Prof. Dr. Geert Molenberghs agree on this. "When we first started conducting statistical research in the early 1990s, SAS was offering already a very comprehensive, leading statistics-based software on the market," observes Prof. Dr. Verbeke. "Of course, as the years went by, new programs appeared on the scene. But as yet, there isn't a software package out there that is as comprehensive and stable as the ones that SAS has on offer."

Software for multiple applications

The SAS software packages have a wide array of application possibilities. "The packages can be used in virtually every domain of applied statistics. We use them in teaching assignments at biomedical, pharmaceutical, and medical academic faculties," says Prof. Dr. Molenberghs. "They help us to explain to students how statistical procedures work. These packages also enable us to immediately show the output of our queries."

"Moreover, we use the programs to conduct biostatistical analyses for universities, pharmaceutical companies,

national authorities, and the like" adds Verbeke. "What makes it particularly interesting for us is the possibility to work with missing data. In biostatistics you work with human data, which rarely provides a full data set. But with SAS you can still perform your analysis and present the client with reliable conclusions."

"Close collaboration with world-renowned professors in statistics benefits the performance of SAS software"

Openness supports ground-breaking research

The SAS software packages are not only useful in teaching and consultancy, they also support researchers. "Conducting cutting-edge research is easier when there is a powerful software package supporting you. SAS offers us just that," explains Verbeke. "SAS allows us to design our own macros. This greatly facilitates our efforts."

SAS already features procedures based on the most recent trends in statistics. "SAS developers are clearly familiar with the statistical literature," points out Molenberghs. "They deeply understand the most advanced and complex meth-

“Developers at SAS follow the latest developments in the world of statistics and translate them into comprehensive software procedures.”

Geert Verbeke

Prof. of Biostatistics, Biostatistical Center
at the Catholic University Leuven

“SAS was one of the first companies to offer a statistics-based software package. Today, it is still the most comprehensive and stable tool on the market.”

Geert Molenberghs

Director of the Center for Statistics
at Hasselt University

ods and, perhaps even more importantly, they have the capabilities to translate these statistical procedures into software.”

Working together generates mutual benefits

SAS developers not only carefully follow the statistical literature, they regularly attend, and present at, international conferences as well. “We often encounter SAS people at symposia and conferences,” confirms Verbeke. These initially accidental meetings helped jump-start a close collaboration between the two academics and SAS. “It started with us commenting on the adequacy of the statistical procedures included in the SAS manuals. In return, we asked them to check the accuracy of the SAS outputs in our publications.”

“Today, we are part of the Beta-user group, testing new and enhanced existing SAS procedures,” adds Molenberghs. “Clearly, we have found a mutual benefit in this collaboration. For us, it facilitates our research, teaching, and analysis activities. For SAS, it ensures cutting-edge software with optimal performance.”

World-renowned Belgian professors

Professors Geert Verbeke and Geert Molenberghs are both world-renowned for their major contributions in a wide range of applied biostatistics. Since the beginning of the nineties, both have been conducting cutting-edge research in the fields of repetitive and missing data. This research, along with their track record as gifted and motivational teachers, has led to consultancy work, analysis, and teaching assignments all over the world. A short extract from their long list of credentials includes:

- * **Spain: teaching in a newly started course programme in biostatistics at Universitat Autònoma in Barcelona**
- * **Brazil: teaching courses on longitudinal data analysis at São Paulo University**
- * **USA: webinars on longitudinal and incomplete data for the American Statistical Association**
- * **USA: longitudinal and incomplete data analysis for a large pharmaceutical company in New York**



SAS INSTITUTE NV/SA | HERTENBERGSTRAAT 6 | B-3080 TERVUREN
TEL: +32 (0)2 766 07 00 | FAX: +32 (0)2 766 07 77 | WWW.SAS.COM/BELUX

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. Copyright © 2007, SAS Institute Inc. All rights reserved.

AUGUST 2007