SESUG Speaker Sharing Program

To arrange for a SESUG speaker, contact Marje Fecht at Marje.Fecht@prowerk.com

Speaker:
Greg Nelson
President and CEO, ThotWave Technologies, LLC.

Bio:

Greg has just celebrated his 20th year in the SAS eco-system. Starting out as a Social Psychology student doing statistical analysis then quickly moving into applications development. Greg is the President and CEO of ThotWave Technologies where he supports an entire organization focused on helping customers leverage their investment in SAS. Prior to ThotWave, Mr. Nelson spent several years in consulting, media and marketing research, database marketing and large systems support. Mr. Nelson holds a B.A. in Psychology and PhD level work in Quantitative Methods.

ThotWave Technologies, LLC. is a niche consultancy and a market leader in real-time decision support, specializing in regulated industries such as Life Sciences, Energy and Financial Services performing market and credit risk management, fraud and financial and clinical reporting services.
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Presentation Topics:

- A Pragmatic Programmers Introduction to ETL Studio: A Hands on Workshop
- Base SAS vs. ETL Studio: Understanding ETL and the SAS tools used to support it
- Best Practices for Automated Testing and Real Time Notification in SAS Applications
- Real Time Decision Support: Creating a Flexible Architecture for Real Time Analytics
- Real Time: What is it and what are we doing about it
- Using BI Tools from SAS for Clinical Reporting
- Using ETL Studio for Clinical Research
- Web Development: Best Practices for Developing Enterprise Applications
- XML and SAS: An Advanced Tutorial

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Abstracts:

A Pragmatic Programmers Introduction to ETL Studio: A Hands on Workshop

ETL is the process of moving data from a source system (such as operational systems or a table in a database) into a structure that supports analytics and reporting (target). This workshop will guide participants through a structured, hands-on exercise designed to give them a broad overview of what things we can accomplish with ETL Studio. Here we will prepare data for use by extracting data from an external file, dealing with the exceptions (bad data), creating transformations that enrich our data, combining it with other data for completeness and finally loading the data into tables that are part of a star schema. The goal of this workshop will be to get users comfortable with the tool and demonstrate its capability.

Base SAS vs. ETL Studio: Understanding ETL and the SAS tools used to support it

Every data warehouse, data mart and data hut needs it. Every good business intelligence interface depends on it. It has been the hallmark of what SAS programmers have done for over 30 years – the ability to beat data into submission (a.k.a. ETL - extract, transform and load data). Now all grown up and ready to take on the world, SAS' ability to get at just about any data source, massage, cajole, beat, cleanse and transform information and then make it sing and dance in your tool of preference makes SAS the ideal choice for modern decision support applications.

So which tools, technologies and/or approaches can we use for ETL and which make sense for any given application? We will explore the world of ETL from the perspective of the tasks that we have to accomplish and compare using BASE SAS tools versus ETL Studio. To that end, we will highlight what a good ETL system should be able to do by taking a lesson from Ralph Kimball and his book outlining the 38 subsystems for ETL. Here we will touch on several of the key tasks found in ETL and show you how to accomplish these using both BASE SAS and ETL Studio. In addition, we will summarize the major capabilities of each approach as a quick reference for management.

Best Practices for Automated Testing and Real Time Notification in SAS Applications

Data management is one of the cornerstones of SAS as a language. SAS programs that access, manage, analyze and report on data are often taken from vast libraries of tools that are used over and over again for consistency and desirable for their reuse in similar projects. Over time, the number of potential uses of any one program or macro is challenged by the amount of time it takes to test, retest and validate these programs. As these programs become part of the production eco-system in a development environment, it is important they their testability, robustness and manageability become "built-in" to the software development process.

This paper outlines as a specific approach to building in that process to each and every program to monitor the conditions SAS programs encounter and proactively test for and announce any validation issues. We will explore the concept of automated tests through assertions, events and their attributes, event status management, and automatic notification of events to interested parties. These concepts are presented from the perspective of the SAS programmer and the systems analyst.

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Real Time Decision Support: Creating a Flexible Architecture for Real Time Analytics
(Note: appropriate as a **Keynote/ Plenary Session presentation)**

Leaders have focused their entire careers on their ability to gather, assess, evaluate and assimilate data to effectively drive change. The deployment of enterprise systems and strategic initiatives to support customer intimacy and organizational preparedness has often led to the development of data warehousing and business intelligence applications that optimize the data paths between those who know and those who should know. The end result of much of this effort is a complete infrastructure designed to move data through the enterprise. Drip feeds, wipe and load, "slowing changing" dimension management, swim-lanes, parallelization, data optimization – all technical details that obscure the fact that data is still 12 hours old.

This presentation focuses on the things that we can do today to make data movement happen so that decisions can be made with better quality, in near real time. In addition, attention will be paid to when we should drive for real-time decision support and when it might not be appropriate. Finally, we will discuss a framework that supports low cost, incremental improvements in your information architecture at the same time optimizing the business processes to ensure information transparency across the enterprise.

Real Time: What is it and what are we doing about it

Real-time computing is the term used to describe systems which are subject to constraints in time. Typical data warehousing processes are, more often than not, batch processes that are allowed as much time as needed to perform the required transformations and loading processes. Business Intelligence applications demand exceptional performance by the user and people work hard to optimize for performance, yet performance problems rarely incur any serious penalty.

SAS Software is applied in many contexts and different scenarios. Common uses include as the driver for an ETL process (to a data warehouse/mart/h ut/superstore) and as a just-in-time reporting tool. What may not be apparent are the opportunities for introducing real time techniques in the heavy lifting world of batch processing and ETL, analytics and of course, just in time reporting and notificati on (business intelligence).

Leading industry analysts (Gartner, Bloor among them) agree that real time business activity monitoring is the missing link in most BI strategies. We will discuss the ways in which SAS Software is ready (and unready) for this next technological challenge. In this paper, we will take inventory of the possible uses of real time processes throughout the SAS system. Here we will focus on what critical business issues seem best solved by real time agents that cleverly attract the notice of systems administrators and those that create value for business analysts.

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Using BI Tools from SAS for Clinical Reporting

Tables, figures and listings in the clinical world have always been treated like an artisan's affair – each program has to be carefully crafted to fit the requirements of the protocol and while standard macro libraries, program templates and coding standards have been adopted to varying degrees, the convergence on a standard approach to the generation of tables, figures and listings has been fairly elusive. In this workshop, we will let you decide by understanding just what the Enterprise BI Server offers you and will include a tutorial on the creation of Stored Processes for use in SAS Web Report Studio and the SAS Add-in for Microsoft Office.

Using ETL Studio for Clinical Research

Preparing data for use in clinical research has traditionally been relegated to the BASE SAS programmer. With advances in standards like CDISC, FDA Guidance documents (e.g., Item 11), ICH, HL7 and others along with the convergence on clinical data management systems and modernization strategies, could ETL Studio really be used as a tool to help read data from data management to prepare derived datasets and analysis tables? This workshop is designed to give the programmer and manager a look at using ETL Studio for clinical research. In this workshop, we will focus on using ETL Studio to support the business process of reading from data management systems to prepare derived datasets and analysis tables (to any standard, internal or external) or more generally, how to use ETL Studio to support the processes of clinical research.

In this workshop, we will touch on how ETL Studio could be used to read and write to some of the aforementioned standards.

Web Development: Best Practices for Developing Enterprise Applications

Software development has a rich history that stems from 40-plus years of tried-and-true practices. From structured programming models to object- oriented methods, the student is often left to her own devices to implement code based on a highly creative -- and subjective -- design process.

In this paper, we will explore some of the foundations of our software development methodologies and apply these to Web programming for SAS applications. We will present coding techniques, lessons learned from our experiences as architects and experiences proven to be too painful to be ignored.

Examples will include reference to HTML, JavaScript, SAS/IntrNet®, JavaServer Pages, XML and ODS.

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XML and SAS: An Advanced Tutorial

One of the goals for SAS applications developers has been to develop three-tier and n-tier applications where the application logic (business rules) is separate from the data, which, in turn, is isolated from the user interface. In a previous paper (Barnes Nelson, 1999) we discussed how to implement this logic separation using the SAS Component Language. This paper extends that line of thinking by introducing SAS developers to XML. eXtensible Markup Language, or XML, is a protocol of sorts that can be described as a technique for separating data from its presentation. In this paper, we will discuss XML in the context of SAS applications and how it can be used in the preparation and presentation of data. We will explore some of the features of XML that makes it a good partner for SAS-based applications.