

## Paper 145-29

# So You Want To Write A SUGI Paper? That Paper About Writing A Paper

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## ABSTRACT

You just attended your first Users' Group conference, and you come out of one really good session thinking, "Hey, I could write a paper like that about My Project!" That's what happened to me after I attended my first NESUG in 1996. And it has happened to others; just recently, in fact, a colleague asked me where he could find "That Paper about Writing a Paper." We couldn't find anything providing specific guidelines on how to approach the process. This paper will introduce the paper writing process: choosing a topic, researching it, developing an outline, and actually writing the paper. I'll also walk through developing a presentation from an outline created in PowerPoint®. That's the best way I've found to ensure that the presentation and paper are in sync. I'll go over tips on making an effective presentation. Finally, in the reference section I'll provide other resources for writing good papers and giving good presentations.

This paper is a guide to get you started on writing a paper. There are entire books on the subjects touched on here. For more information, see the References.

## OVERVIEW

There are three things you need to write a good paper:

### INSPIRATION

You must really enjoy the topic you will research; you are going to spend some time with it!

### PREPARATION

What kind of background work do you need to do? How do you research your topic?

### PERSPIRATION

You will be sweating to meet your deadlines. Then you will get up and talk to a group of strangers who expect you to know what you are talking about. If that doesn't make you sweat, nothing will.

## INTRODUCTION

### GETTING STARTED

The first thing is the inspiration. What really fires you up? My purpose in writing this paper is to inspire more of my SAS® colleagues to write papers and write them well. I started writing papers late in my SAS career; I already had almost 20 years of experience when I wrote my first NESUG paper in 1997. Why did I wait so long? I had not been attending the regional conferences. My first conference was NESUG 1996, when I realized; hey I could do that.

### CHOOSING A TOPIC

I will reiterate the advice I got when I was working on my dissertation proposal – write what you are enthusiastic about. You'll be an expert by the time you are through and you don't want to get bored and lose steam halfway through the process. And I'll reiterate the advice commonly given to a book writer – write what you know. But, you don't have to know it inside and out; you'll be doing research. You might choose a topic that is a proof of concept for a project that you are about to begin.

## DO YOUR RESEARCH

In order to write this paper, I used many different sources of published materials on writing a paper.

### RESEARCH - ON LINE

For SUGI 29, I found the presenter's package helpful. <http://support.sas.com/usergroups/sugi/sugi29/package> It contains the paper presentation guidelines, mostly referring to the formatting of the paper. The section on Visual Guidelines gives specific recommendations for creating a successful presentation (some of which are included here) and an excellent paper by Helen-Jean Talbott discussing effective posters.

Since I knew there weren't any good resources available from the conference proceedings, I started with some general on line search engines. Google ([www.google.com](http://www.google.com)) easily translates your search criteria into a query of the World Wide Web. I used "writing a technical paper" and got back many good resources, some of which are referenced here.

I also like Ask Jeeves ([www.ask.com](http://www.ask.com)). Here I entered my search as a question: How to write a technical paper. I got back a quite different set of resources than the Google list, some of which were excellent as well.

The SUGI proceedings can be searched on line at <http://support.sas.com/usergroups/SUGI/proceedings/index.html>

However, I was disappointed with the results. When I searched on “writing a technical paper,” the search engine returned all of the papers in the SUGI 28 proceedings. The word “paper,” as in “Paper 145-29,” has been included in the indexing.

I didn't spend too much time with the NESUG on line proceedings ([www.nesug.org](http://www.nesug.org)) either. You have to search them by conference, so if you don't know which conference to start with, you are out of luck. Some improvements have been made since NESUG 16.

But don't be discouraged! Lex Jansen, a frequent SAS-L contributor in the Netherlands, has put up his own version of the SUGI proceedings on his web site [www.lexjansen.com/sugi/index.htm](http://www.lexjansen.com/sugi/index.htm)

Here you can find the proceedings from SUGI 22 through 28, easily searched by subject or by author (and powered by SAS!) He has also included the NESUG proceedings, and some papers from SEUGI.

### RESEARCH - OFF LINE

I've used the electronic versions of the proceedings from both SUGI and NESUG. I find the NESUG CD is easier to search (thanks to Mike Zdeb). Both are easier to use than the on line version. SESUG provides a CD as well as hard copy proceedings. You can, of course, also use the hard copy proceedings.

If you're anything like me (a SAS programmer / packrat) you have a considerable collection of “white papers” on various SAS subjects. (See my paper on programming standards for advice on decluttering). Now is the time to look through them again.

### RESEARCH TIP



I'm going to use this waitress to set off the tips. We had a group here in DC called “Tip Your Waitress” and my first job out of high school was as a waitress. When you print off a hard copy of a paper, be sure to write the source of that paper, e.g. SUGI 27 or NESUG 14. Many authors write in multiple forums. I found I had a copy of a paper by Art Carpenter that I couldn't find in the SUGI proceedings when I went to reference it. Turns out it was from the NESUG proceedings, even though Art is based in California. (Note: the NESUG proceedings, starting in 2003, addressed this problem by including a banner for the Conference and section. SUGI began doing this in 2003 as well.)

## WRITE THE PAPER

### WRITE FROM AN OUTLINE

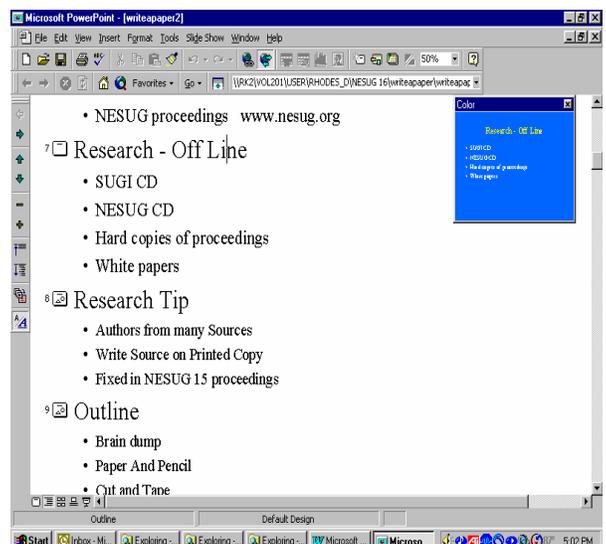


I start out writing an outline just as I did in graduate school. I do a “brain dump” first, just writing down every point I want to make, in no particular order. I use paper and pencil, and write on one side of a legal pad. I've also used 3 X 5 cards, which works when you are doing real research and need to isolate quotes and sources. Then I cut apart the outline and rearrange it into a logical order. Then I tape it together, and type it into Power Point or Word.

I've come to prefer using Power Point in outline mode to rough out my paper and presentation. This gives me an overall structure for my presentation, which I always put off until the last minute. It's

easy to change the order of major bullet points, which translate into slides. This way I don't have so much work left to do at the last minute. Once I'm happy with my outline, I save it to a file and transfer that file into my word processor.

Developing an outline and writing is an iterative process. Be sure to review your paper (draft and final) against your outline to make sure they are still in sync before you turn in the final paper. When you make changes to the paper, change the outline first. Always work from an outline.



**PLANNING**

Each major bullet in your outline corresponds to a slide. The number of slides gives you an idea of the length of your presentation. Expect to spend 30 seconds to a minute on each slide.

**TIME FRAMES**

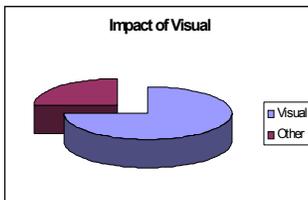
The call for papers usually is 4 to 6 months before the conference. That is when you need to submit your abstract. The final paper and postscript file (and starting in 2004, pdf) are due 2 to 3 months prior to the conference. Your presentation is up to you. I prefer to have it ready just after the final paper, and try it out in front of other users (Westat SAS Users group). Others are still working on theirs on their laptop on the airplane on the way to the conference.

**KNOW YOUR AUDIENCE**

Who is going to be interested in your topic? Is it the technical folks, the down in the trenches types, the doers? Or is it aimed at the Managerial types, the planners, the dreamers? At what level do you approach the topic? Beginner, Intermediate, or Advanced? The difference will drive the level of detail you use, the examples you use, and how much code you show.

**USE A CONVERSATIONAL STYLE**

Remember to use Active Voice. This makes your writing clearer and terse. Keep it simple by avoiding jargon and buzzwords. Keep it simple by avoiding big words. For example: use End not Terminate, Use not Utilize. See the references for more examples.

**A PICTURE IS WORTH 1K OF WORDS**

Use Visuals. Seventy-five percent (75%) of information comes to us visually.

**WHAT'S YOUR POINT?**

Limit yourself to a handful (2 - 5) of major points. You will use them to structure your paper and presentation. You should concentrate on these major points as what you want your audience to remember. This paper goes into greater detail than the presentation. I may need to refer the audience to the paper, especially when I present in a 20-minute slot.

**TALK IN THREES**

Human beings have a tripartite brain. We process information in batches of three. I remember this by recollecting that in college, I had to carry four courses, and I could never remember the fourth class. The literary device known as a three-pronged slur is an effective example. You can probably think of some examples off the top of your head. "I came, I saw, I conquered." "Eat, drink, and be merry." You've probably seen the Master Charge commercials. They list the costs of three things, and then a fourth which is always "Priceless."

**QUALITY CONTROL**

Does your paper follow the conference standards? Each one is a little different. I'm writing this paper for SUGI and Pharma SUG. One wants page numbers, one doesn't. Are you using a proper Font? If you use something unusual, your paper may look different when someone else prints it. Are you within the page limits? This is becoming less important as we move to proceedings on CD. Did you run Spell Check and Grammar Check? There's really no excuse for a misspelled word. Finally do you know how to prepare the Acrobat File, PDF, or PostScript file? Check that any URL's you've referenced are correct, and review your code for accuracy and confidentiality.

**THE ABSTRACT**

(Re) Write it Last. The abstract is always the first thing you write for submission to the conference. It really should be the last thing. The audience for your abstract is about 10 to 500 times that of your paper (see Scrutiny of the Abstract), and you want to grab the reader's attention. It should not be a table of contents, which is the style employed by most SAS papers. Instead it should be the essence of the paper. I'm pretty content with the abstract I wrote for this paper. We have a review process at Westat, which helps improve the quality of our papers, and the abstract has to be approved before it is submitted.

**WHEN YOU THINK YOU ARE DONE**

Use peer review to make sure your paper communicates the information you intend. I always have my mother read my papers to make sure my grammar is correct, and I haven't used too much technical gobbledygook.

## COMPOSE YOUR PRESENTATION



### REVIEW

Does your PowerPoint outline still match your paper? Do a side-by-side comparison to make sure.

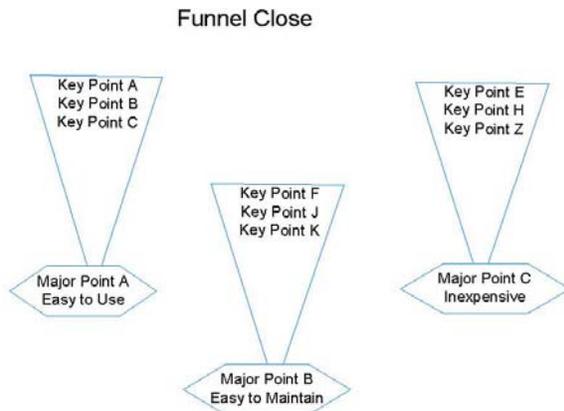


### DESIGN THE CLOSE FIRST

David Peoples (1992) tells us to design the close first. I'm going to mention a few that are appropriate to a technical presentation. This paper/presentation uses the **Happy Ending Close**. When I'm done, every one reading this paper should feel confident that they could write a paper.

For a tutorial where you are trying to get across your handful of points, you might use either the **Funnel Close** to focus in on those points or an **Iceberg Close** to telescope out. These are the handful of points your audience will remember.

To use a **Funnel Close** (described in Peoples' book) you define the major points you want the audience to remember. Let's say you have three. Then you classify your key points in relation to these three central ideas. So you "funnel" your talk into three final ideas. The Iceberg Close is the inverse – you start with your major points and expand out it in detail. See Peoples' book for other ideas on how to design your presentation.



The **I'm Here to Help Close** may or may not be appropriate at a users' group. This close convinces your audience that your product or service or method achieves the objective. Remember that the conference is not the place to sell your product or service, but to sell your method or expertise in SAS.

### ANIMATION

Use some animation to move your presentation forward. A little goes a long way, and helps keep folks alert. I have found the use of Revelation Technique(s) to be particularly useful. You can use Typing to simulate using the keyboard; Flying In, to bring in your slide point by point, and Graying Out to de-emphasize the points you've all ready made. Experiment and see which ones fit your style.

### VISUALS

Most word processing packages include a good library of Clip Art and Animations. Take a look at them as you are

composing your slides, and add some appropriate visuals to give your talk more zip. See more under humor, below. If your company has a Graphics Department, check with them. They may be helpful to you in creating custom visuals (particularly if you are doing a poster).

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### PLAN AHEAD

If you are planning to bring up SAS interactively, think again. I have seen presentations given by expert presenters where this has been a disaster. I strongly discourage bringing SAS up during your presentation. Instead, use screen shots of the different steps in the SAS session you want to illustrate. If you are really clever, you may even be able to fool your audience into

thinking you are running SAS by using typing animation. (See Ed Heaton's presentation on System Options as an example). Know that screen shots are quite voluminous, so plan on loading your presentation onto CD. My presentation on Oracle has four or five screen shots and takes 7 diskettes to load.

If you are really set on bringing up SAS live, for example if you want to demonstrate how to build an AF Object, think like the cooking shows. Show us how to whip up the ingredients, and then reach into the oven for the dish you baked ahead of time.

## GIVE YOUR PRESENTATION

Be prepared, committed and interesting



### PRESENTATION TIP: STAND UP

## TELL A STORY

Think of your presentation as the story of how you accomplished a project or task. This paper is the story of writing a paper.

## HAVE A QUOTE

[http://www.three-peaks.net/comp\\_fun.htm#quotes](http://www.three-peaks.net/comp_fun.htm#quotes)

## CONFUCIUS SAID

They Hear it, See It, and Do It

## GIVE AN EXAMPLE

This is the example!

## HUMOR

Common sense tells us to use humor. What if you can't tell a joke? Don't. But surely you can think of an anecdote that's relevant, maybe a funny lesson learned. Try using cartoons. Even the clip art that comes with MS Office® is pretty funny; I'm partial to the Screen Beans. You can do a google search on "computer cartoons" and find entire web sites devoted to the subject. Or maybe you like quotes. Again you can find entire web sites devoted to computer humor.

## PRESENTING CODE

Try using the enhanced editor, then cut and paste from there. The color comes across and it looks nice on a white background. Limit the amount of code you present, be sure that it works, and protect confidential information (about your code or data). You can experiment with blowing up the piece you are talking about and putting the context in the background.

```

/* 20001004 EH : Created macro to create value labels from a Co/Ed Source File. */
/* 20001030 EH : Corrected code to capture the last record in the Co/Ed Source File. */
/*-----*/
%Macro CreateValueLabelsDataSet (Infile, Outfile, Debugging0) ;
  %If %Debugging %then %do ; %TurnDebugOptions(ON) %end ;
  Data %Outfile (If not %Debugging %then drop _: );
  Attrib
    FmtName label= "Format Name" length= $ #
    Start label= "Starting Value for Format" length= $ 16
    End label= "Ending Value for Format" length= $ 16
    Label label= "Format Value Label" length= $200
    Type label= "Type of Format" length= $ 1
;
  Retain FmtName Type ;
  Infile &Infile truncover end=EOF ;
  /* Input the record code and hold the record. */
  Input @1 _StatementType_ : $1. @@ ;
;
%Mend CreateValueLabelsDataSet;
/*-----*/

```

## SINS (FROM DAVID PEOPLES) AND PET PEEVES

### #5 Turn the Lights Out and Show Slides While Reading a Script in the Dark Right after Lunch

If you must use notes, keep them brief. One recommendation is to memorize the first few minutes of your presentation, and the last few minutes. Everything in between should flow from the information you want to present.

### #6 Read Verbatim Every Word on Every Visual. The audience will just ask for the handout, please.

Don't read your slides and don't put every word on your slides: use bullet points

## MAKE EYE CONTACT



Talk to the clock in the back of the room. Find someone who looks friendly and talk to him or her. Then find someone else.

**BE HEARD**

Project your voice. Avoid using a monotone by varying the volume, pace, and pitch of your voice. You will ooze confidence and enthusiasm.

**WHAT ABOUT HANDOUTS?**

You've prepared a complete set of handouts. Now what happens when you have them on the table by the door? People with a busy schedule will pick them up and leave; you will lose your audience. If you intend to use a complete set, distribute them at the end. A better strategy is to prepare a separate Notes Pages with a bare bones outline. This gives the audience something to follow along with and take notes while you give your presentation. The SUGI Handout Policy states "Because the SUGI Proceedings are available prior to the conference, you do not need to provide handouts of your paper. Handouts should be used only for supplementary information such as example code, graphics, an appendix, or other supporting material."

**QUESTIONS - DO**

Listen to the question. Show that you heard it by repeating it. Use the microphone so that the rest of the audience can hear it, too. Show that you understand by rephrasing it. Keep your answers brief.

**QUESTIONS - DON'T**

Don't interrupt the person or assume you know what the question is going to be. Don't dialog with one person – remember your audience. And above all, don't bluff. If you don't know, say "I don't know" or "I'll get back to you."

**PRACTICE, PRACTICE, AND PRACTICE**

Try it out. Try it on a non-technical friend (I use my mother). Try it out on your enemies, your worst critic. Your goal is to go through the whole show with no notes!

**CHEAT SHEETS**

If you must have notes, use the notes feature in Power Point. Remember to print them out before you leave for the conference, since you might not have access to a printer there. I have used notes for more technical presentations. I have learned the hard way that if I have notes I will refer to them, and I may lose my place. For me, it is better to make one last pass through on my laptop before the presentation than to rely on notes. It gives me confidence that I know what I'm going to talk about.

**MURPHY'S LAW - WHAT CAN GO WRONG**

All of the following have happened in the past:

- Slides not compatible with projector – This happened to me during my first NESUG presentation, even though I had practiced. It was very distracting; the top of the slide wouldn't stop waving. I still thank Ray Pass for the make shift cardboard he put over the top of the lens to hide the top of the slide.
- No extension cord or the wrong length
- Lights controlled in another room. It is just great when half way through the show someone turns the lights off.
- Start time / name wrong on program
- No Air Conditioning. This happened to me at my wedding, but that's another story.
- No Microphone or the wrong kind. Recently we had a DCSUG meeting with only a hand-held mike, not the best for doing a presentation requiring a mouse and typing.
- No Mouse or no Mouse pad
- No Section Chair and No Laptop – The section chair at one SUGI presentation given the morning after the kick back party failed to show up.
- Section next door too loud and out of sync with your section
- Section not near the other sections. This happened to me when I was the first presenter of the morning at NESUG in Solutions, which was in a different part of the hotel than all the other sections.

**DISASTER PREVENTION TIP: PRACTICE AND USE THE REHEARSAL ROOM**

The bottom line - use the Rehearsal Room, come to your presentation time slot early enough to avert disaster, and always have back ups. Make a copy of your presentation on CD or diskette and test it on a laptop before you leave for the conference.

## KEYS TO SUCCESS



Be Competent. I watched James Lipton interview Billy Joel on Inside the Actors Studio. Lipton remarked on what a good pianist Joel is. Joel's response was "I'm competent. In an area where most people are not, being competent looks great."

You don't have to be Excellent. Just Be Good. David Peoples says that you should strive to Be Good in a world where everyone else is Terrible

## CONCLUSION

Anyone can write a paper. Write from an Outline. Practice, practice, practice

## REFERENCES

Where you reference papers in proceedings, provide a URL link to the on-line document.

Bly, Robert J. "Ten Ways to Improve Your Technical Writing." On line at <http://www.dac.neu.edu/english/m.walsh/eng1125/assign2.html>

Landes, Kenneth K. (1951) "Scrutiny of the Abstract.", *AAPG Bull.*, Vol. 35, No. 7.

Peoples, David A. (1992) Presentations Plus: David Peoples' Proven Techniques, Revised Edition. John Wiley & Sons.

Strunk, William J., E.B.White. (2000) The Elements of Style. Allyn & Bacon on line at <http://www.bartleby.com/141>

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**DISCLAIMER:** The contents of this paper are the work of the author(s) and do not necessarily represent the opinions, recommendations, or practices of Westat.

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