



October 19, 1999

The fifth meeting of the Madison Area SolidWorks® Users' Group (MASWUG) was held on October 19th, 1999 on the Nicolet campus. 71 people attended from 36 companies and organizations.

Main Presentation

Ron Pulvermacher from Matrix Product Development gave a presentation: "Assembly Time Saving Tips, Techniques and Tricks". Here are some of the highlights: Name mates, i.e. "C" for Coincident, "CC" for Concentric, "D" for Distance and "P" for Parallel to save screen space. Use other meaningful words like "Crankshaft Alignment". Use "Select Other" command as a time saver. Use smart mates. Use color for bosses, cuts, surfaces, etc. to make it easier to visualize the part and its features. Ron the showed us an example of a printed circuit board. Use interference detection in assemblies. Use Hot Keys to speed up menu picks. If you use a part in two different assemblies, you cannot edit the part in context in the second assembly unless you check the option Tools/Options/External References "allow multiple context for parts when editing in an assembly". Use named surfaces to swap out parts in an assembly. Use planes and axis to define the mates as much as possible so that features can be suppressed in the simplified version without losing the mates.

At the end of the question and answer period, we had small group discussions on the topic of "Trouble Shooting Assemblies". The entire group came up with the following Trouble Shooting Tree. You are given the task of modifying an assembly and when the file is opened, the Feature Manager is lit up with red arrows, what should you do?

Assembly Trouble Shooting Tree

- 1) Look for the designer
- 2) Make an extra copy of the assembly
- 3) Understand the parts and how the assembly was assembled (ask 1)
- 4) Resolve all parts
- 5) Open sub assemblies or parts and look for parts or features with problems (missing parts, '!', '?')
 - a) Search for parts using Windows Explorer
 - b) Make sure you are using the most current part
- 6) Fix parts and sub-assemblies



- 7) Using "view dependencies" (right mouse click over the assembly name in the Feature Manager) to see where all the problems are, on which parts or features.
- 8) List the external references on parts with '->?'
- 9) Go to file "find external references"
- 10) Suppressing mates one at a time to find the errors
 - a) Start from the bottom of the Feature Manager tree
- 11) Look for in-place mates (created within the assembly)
- 12) Use the Rollback bar
- 13) Edit definition on the mate to check if mated features are still valid ('?')
- 14) Save when all errors are done. Saving periodically at different steps in the fixing process.
- 15) Warning! In-context parts can get you in trouble, try to remove in-context associations
- 16) Use planes instead of sketches to mate parts. They are more robust

Breakout Sessions

2 breakout sessions were available:

1. "Getting the Best Results from PhotoWorks"
Facilitator: Jeff Setzer, Graphics Systems Corp
2. "An Exercise in Visual Basic" roundtable problem solving
Facilitator: Jeff Wong, Paradigm Design Inc.

12 people attended the Visual Basic roundtable discussion. We completed a program started by Christine Shorey from Nicolet Instruments Corp. The VB program objective was to hide any sketch that was still shown in a part. We completed the section of code so it would work for a part. There are still two other routines (assemblies and drawings) that are left for anyone who wants to tackle it. The program will be e-mailed to all those who participated. For those who could not attend the break out session, look for the program in the near future on the SolidWorks web site.

We will try to do another problem next meeting. The objective of these sessions is to solve SolidWorks related problems with a VB program. The group writes a generic program and the users then customizes it for their company's needs. So I need more ideas for future programs. Please send them to wong@nicolet.com.



If you missed the PhotoWorks session, Jeff Setzer will be giving it again in New Orleans at the International Users Group Conference January 12-15.



Call for Volunteers

We are also looking for a volunteer organization to host the next meeting, tentatively scheduled for late January. The Host Company simply needs to provide a modest space for the meeting. SolidWorks pays for the treats; Skup and Wong will organize the event.

Special Thanks

Ron Pulvermacher from Matrix Product Development, Jeff Setzer from Graphics Systems Corp, George Skupniewicz of Nicolet Instrument Corp., Jeff Wong of Paradigm Design Inc., Christine Shorey of Nicolet Instrument Corp., and Carol Faiola of SolidWorks Corp.

Please forward these minutes to others who work at your company or are interested in joining MASWUG. Please send any secretarial business (i.e. potential new member e-mail addresses for the database, comments about the meeting, the meeting minutes, etc) to: wong@nicolet.com.

Submitted by MASWUG secretary: Jeff Wong