

Executive Committee 2002 - 2003

November 1, 2002

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CHAIR'S MESSAGE

To all of our Central Ohio Section Members,

I had the pleasure of listening to Ernest Levert, P.E., President of the American Welding Society speak at our October section meeting held jointly with AWS.

Ernest was a U.S. Navy certified high pressure welder prior to studying welding engineering at OSU. He gave an inspirational presentation on welding and its importance to society, with emphasis on the importance of future students. I didn't realize that OSU is one of the few schools in the country that offers welding engineering as a dedicated course of study, and I would encourage our student members to investigate this fascinating program.

Our section meetings for the year are shaping up to be new and exciting. Read the newsletter!

See you at the section meeting, and have a Happy Thanksgiving.

Best Regards, Bart Eckhardt, P.E.
Bart Eckhardt
Chair, ASME Central Ohio Section

Central Ohio ASME Web Site

Help us improve our site. Visit <http://www.CentralOhioAsme.org> and review what's there. You can find information about our current and past programs, the executive committee, links to ASME resources, newsletter archives, a list of our sponsors, and more.

The only way that we can improve the site to better serve your needs is to get feedback from you. The Internet can be a tremendous resource, so send us your good ideas. We look forward to hearing from you.

ASME Pipeline Systems Division (PSD)

The PSD is looking for volunteers interested in pipeline engineering to serve on its Technical Committees. To find out more about PSD, visit their web site at <http://www.asme.org/divisions/pipeline>.

NOVEMBER 14 – PRESENTATION AND DEMO

"Visualization and Collaboration of Engineering/Scientific Datasets"

Presented by Rajit Kumar¹, Manager - Business Development of VirtualE3D USA Inc.

As design practices becoming more diversified and sophisticated, there is a need for accessing design data at very early stages of product life cycle to improve decision support system. Engineers should be able to visualize, evaluate, interact and collaborate with a variety of design and validation data from different sources, across the enterprise, and in an extended enterprise environment. This enables design groups to establish true virtual prototyping for design reviews of mechanical design and validation data.

The applications for visualization and collaboration are already widely used in the following industries: Automotive, Aerospace, Heavy Machinery, Medical Research, Power Plants, Oil and Natural Gas, and Defense. Data sets come from variety of systems like UniGraphics, ProE, and CATIA, ANSYS, NASTRAN, ABAQUES, Fluent, and Star-CD.

The *highlight* of the presentation will be a series of demos using a virtual prototyping tool called vCollab, using Crystal Eye glasses (3D glasses). Some of the following models will be shown:

- Visualization and walk through of Steam flow in Turbine in Virtual Environment
- Visualization and walk through of water passage through large cylinder head of an engine block
- Visualization of entire car assembly and analysis of assembly and disassembly sequencing
- Studying component/sub-assembly interferences in an aircraft
- Visualization of air particle flow dynamics over an aircraft wings at different angle of attacks
- Studying pressure distribution in a displacement tank
- Studying crash tests on a Helicopter

WHO: ASME Members and Student Members

WHEN: **Thursday, November 14, 2002**

6:00 – 6:30 p.m. Social Time

6:30 - 7:00 p.m. Presentation

7:00 – 7:30 p.m. Demonstration of Tools

WHERE: Metro Place North, Building 555, Suite 100, in Dublin, OH 43017

RESERVATIONS: Please register on-line at www.centralohioasme.org, or contact Anup Singh, at Anup Singh by email at asahlawat@hotmail.com, or call (614) 436-0480.

DIRECTIONS: From I-270 (Northwest Columbus), Take exit 17A onto SR-161 East. At the first light, Turn right onto Frantz Road. Again at the first light, Turn right onto Metro Place North. Follow the road until you see Building # 555 (Black Glass Building). The meeting is on the 1st floor.

¹ For any specific questions on the session, please contact Rajit Kumar at 614-893-7421 (cell) or 614-791-3255 (office), or see the following web site: <http://www.virtuale3d.com>

THE EXECUTIVE COMMITTEE meets the first Thursday of every month, at the office of Robson Lapina, 434 East Rich Street, Columbus, OH 43215, (800) 654-4344. You're welcome to join!

Central Ohio Section News

ASME – OSU Student Section

The student section has the following planned for the month of November:

November 6 (Wednesday) Grad school meeting to give members information about grad schools at OSU (Nuclear, Mechanical, and Industrial Engineering Programs.)

November 9 (Saturday) Tentative service project with Habitat for Humanity

November 14 (Thursday) Cargill information session for students

November 15 (Friday) Tour of Ohio State Aeronautical/Astronautical Research Center for students

Sincerely,

Peter Lauffenburger

Chair of the Student Section.

plauffenburger@fastmail.fm

TRIVIA: How do the Light-Sabers in the "Star Wars" movies work?

Unfortunately, lightsabers are not real. Like the Millennium Falcon and Yoda (and even Chitty Chitty Bang Bang, for that matter), lightsabers are a special effect that looks so real you actually believe they exist!

The technique used to create the lightsaber effect is pretty straightforward, but tedious. On the set, the actors use props composed of handles that have aluminum rods attached to them, and these rods are the length of the lightsaber "blade." The handles are plastic models and the aluminum rods are painted red or green or blue. The actors use these props as though they were lightsabers.

After the film is shot, it is taken to the special effects department. The film is developed normally. In this film, the actors look like they are fighting with painted broomsticks instead of lightsabers. A special effects artist now has the job of making those broomsticks look real. The artist looks at the film frame by frame, and projects each frame that contains a lightsaber onto a clear piece of plastic (an animation cell). The special effects artist draws the outline of each lightsaber blade in the frame onto the cell. Then, for each frame, the artist paints in the correct color for the blade using a bright cartoon color. Eventually the artist has a stack of these cells, one for each frame of the movie containing a lightsaber. The cells are clear everywhere except where the lightsaber blade is seen in each frame.

Now, a new piece of movie film is shot. On this film, each animation cell is placed over a black background and shot with a light diffuser over the lens (this diffuser gives the lightsabers the glow they have around the edges). If you were to play this film in a projector, all you would see is the lightsaber blades moving on a black background. Before it is developed, however, the actual footage from the movie is double-exposed onto this same film. The effect is amazing -- the lightsabers look incredibly bright and real!

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