

**MEMBER DAY SEES GOOD  
TURNOUT – TECHNOLOGY  
OVERSIGHT COMMITTEE  
AWARDS PROJECT**

The National Composite Center (NCC) kicked off its fourth annual Member Day April 26 with a special “pre-events” day. The first time event was well attended showcasing NCC technical presentations, a facility tour and reception.

Member Day on April 27 featured new member companies and their stories of invention and innovation. An entertaining keynote was delivered by Richard Morrison, President and CEO of Molded Fiber Glass Companies. He shared anecdotes of his company’s history including introducing fiberglass body panels on the first Corvette.

A number of companies set up exhibits including NCC, the University of Dayton Research Institute (UDRI), WebCore Technologies Inc., Ashland, Cytec, University of Toledo, Schmelzer Industries, 2Phase Technologies and Vanderplaats Research & Development.

The NCC Technical Oversight Committee took the spotlight when it announced this year’s project award. Ultraviolet Curing of Composite Binders and Resins – a proposal submitted by Chris Pung of the Delphi Corporation, was awarded \$35,000 in funding for 2004.

Matching funds of \$105,000 will be contributed by participating companies. They are Delphi, Lawrence Tech, Fusion Systems and Brenner International. The project’s objectives will be to optimize the UV curing technology for manufacturing and create a model to predict cycle times prior to production.



*TOC Chair Harry Couch (far right) presents award check to Chuck Worner, Delphi (center) and NCC support engineers (left) Alan Fatz and Dr. Brian Knouff (far left).*

UV curing has the potential to reduce composite fabrication times by up to 50 percent when compared to conventional methods. Committee Chair Harry Couch presented the award check to Delphi representative Chuck Worner along with NCC support engineers Dr. Brian Knouff and Alan Fatz. Member fees are used to fund shared technology projects. The team for UV curing technology will present the results of the project at next year’s Member Day.

NCC would like to extend a special thanks to each of the individuals that attended this year. The Center values its unique relationship with its member companies and the

great things that result from this ongoing partnership.

If any attendees have suggestions regarding the agenda or schedule, questions about presentations or comments about the event, feel free to forward those to Dave Richard ([drichard@compositecenter.org](mailto:drichard@compositecenter.org))

Member Day 2005 is scheduled for April 25-26 and will be expanded over the two days to include more NCC technical presentations and Member company research projects.

**NCC TEAMS WITH 2PHASE  
TECHNOLOGIES INC. TO  
REDUCE PROTOTYPE TOOL  
TIME AND COSTS FOR  
MANUFACTURERS**

NCC has teamed with 2Phase Technologies, Inc. to offer companies custom manufacturing at the cost of mass production. NCC has purchased a Rapid Tooling System (RTS) 2500 from 2Phase to promote the technology and demonstrate its capabilities.

NCC can show companies how they can reduce the prototyping cycle from 10-15 weeks for hard tooling and one to seven days for rapid tooling to hours with RTS. Costs are also significantly reduced – from \$5,000 to \$10,000 a square foot for hard tooling and \$750 to \$1,000 a square foot for rapid tooling to just \$50 to \$100 a square foot with RTS.



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In addition, the flexible manufacturing option reduces tooling inventory and the space required for storage.

RTS begins with a "wet chemistry" process. A barrier of rubber/elastomeric film separates the master part from the tooling material. Liquid extraction leaves the hard tool surface behind leaving a temperature-stable ceramic-like tool with no shrinkage or brittleness. For vacuum forming, the elastomeric material is removed for part forming. Re-insertion of liquid fluidizes the tool for reforming.

If you are interested in a demonstration or have a project that requires low cost rapid, re-configuration tooling, contact Dave Richard at [drrichard@compositecenter.com](mailto:drrichard@compositecenter.com)

## **NCC TO PARTICIPATE IN DAYTON DEVELOPMENT COALITION'S 20<sup>TH</sup> ANNUAL COMMUNITY LEADER FLY-IN TO WASHINGTON D.C.**

NCC will join 90 area business leaders for the Dayton Development Coalition's 20<sup>th</sup> Annual Community Leader Fly-In to Washington D.C. May 5-6. Activities will include a reception held in the Hart Senate Office Building to honor Ohio's Congressional Delegation, Wright-Patterson AFB and the Springfield Air National Guard.

NCC will be one of just four organizations selected to set up a

table top display at the reception. NCC will showcase the theme "Model For Technology Transfer For Manufacturers." Unlike any other organization, NCC helps manufacturers manage the risk for new ventures by renting the floor space and equipment required to launch new production processes on an as needed basis.

The Center supports this effort with state and federal funds. NCC's Manufacturing Accelerator Campus concept creates a nurturing atmosphere and provides the necessary business utilities. With NCC taking care of the internal support details - new manufacturing line managers are free to focus on their production process and the needs of their customers.

As the critical link in technology transfer, the Center is able to take projects that would normally require up to 10 years to move from the invention stage to industry application and dramatically shortens those steps to just two to four years.

Some of the critical tools and capabilities that give NCC the edge include its signature **Rapid Fiber Preforming**, automated preform technology and closed molding expertise - solutions being used to manufacture a broad range of composite products.

Vector Composites Inc. will attend the event along with NCC as the latest example of how technology transfer for manufacturers can

work. As the Center's first stand-alone business, Vector is able to deliver the power of composite technology at affordable prices to military, defense and commercial aerospace customers.

## **NCC AND VECTOR EXHIBIT AT POLYMER OHIO SUMMIT**

NCC and Vector exhibited at the Polymer Ohio Summit held April 28 in Columbus, Ohio. An established organization, Polymer Ohio has been instrumental over the years in helping to bring polymer companies from across Ohio together. NCC is a member of Polymer Ohio. The organization also holds a membership with the Center.

## **NCC LOOKING FOR NEW DEVELOPMENT WORK**

NCC finished its first financial quarter in the black. This is the first time that the Center has been in the black early in the year. Continuing contracts made this possible.

But NCC is actively looking for new development work to finish booking for 2004. Member companies are encouraged to bring their new development work to NCC. The Center's cutting edge capabilities and unique approach to design & analysis, process development, prototyping and pilot manufacturing provide flexible, cost effective solutions for your research and development needs.