INTERNATIONAL RAPID PROTOTYPING SCULPTURE EXHIBITION

featuring the work of
Beasley Brown Bunsley Collins Gewart Yiester Higham Lavigne Morris Neubauer Rees Snelson Smith Stewart-Smith Van Gent Voci Vogl Woodham
along with
Grossman Hart Longhin Krawczyk Séquin

Kemper Room Art Gallery
Paul V. Galvin Library

November 10 - December 19, 2004

Opening reception
November 10, 5:30 - 8:30 pm

Exhibition hours:
Monday - Friday: 12 noon - 10 pm
Saturday: 8:30 am - 6 pm
Sunday: 2 - 10 pm

art.iit.edu

organized and curated by:
Mary Hale Vissor, Southwestern University, Texas
and
Robert Michael Smith, New York Institute of Technology

sponsored by:
3D-Systems, Inc., California

locally coordinated and curated by:
Robert J. Krawczyk, Illinois Institute of Technology

sponsored by:
IIT Office of the President, Lew Collins, President
IIT Art Board, Judith Carr, Chair

art @ IIT

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Image of Ann Phen by Robert Michael Smith
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Rapid prototyping is used across all manufacturing and design disciplines, from engine parts to prosthetics to toys. Even with the great variety of digital visualization tools available today, a physical model is still desired. The rapid prototyping process offers a designer an opportunity to quickly present a number of physical alternatives. In some cases, the models produced can actually be assembled into working parts.

Many of today's rapid prototyping systems are based on the concept of 3D printing. A digital model is first created and then is sliced into thousands of very thin layers. Each layer is then printed on top of the previous until the entire model is replicated. Instead of printing with ink, the printer uses melted wax or plastic, starch or plaster, or even powdered metal. Depending on the material used, the model may require a finishing step. In the case of the powdered metal, it needs to be heated to burn out the binding material and for the metal to melt. The model can then be used as is, or painted, or used to create molds for casting, or if wax directly cast.

The possibility of going from the virtual to the physical has also attracted artists. Digital models can be constructed using a variety of methods. A model can be simply assembled digitally from simple volumes; cubes, spheres, or cylinders, or from complex surfaces that can be easily defined and then pushed and pulled into their final form. A physical object or person can also be made digital by the use of a 3D scanner and then twisted, warped, morphed, and manipulated into a final idea. Finally, models can be computed. Using a set of mathematical relationships complex models can be easily created and now actually built. Artists use all these methods to express their personal visions. The artist now has a powerful tool to physically materialize only what previously was possible virtually or impossible to construct in traditional sculpting materials. The concept of art-to-part can now become art-to-art.

This exhibit displays just such work; from the inspirational to the transformational to the explicit. Spanning the beauty of traditional forms to the beauty of mathematical ones.

- Robert J. Krawczyk, art @ IIT Gallery Director

Exhibition catalog is available. Artist information and a rapid prototyping resource page can be found at: art.iit.edu

On the cover: Arm Phen by Robert Michael Smith