



### **Digitally Mastered: Recent Acquisitions from the Museum's Collection**

November 22, 2006–November 27, 2007

The Dorothy B. and Lewis Cullman  
Architecture and Design Gallery, third floor

Technological innovation is a driving force in design. As software, hardware, and computer-aided manufacturing evolve, designers adopt these powerful tools to realize designs that at one time would have remained mere fantasy. In their exploration of entirely new forms, designers are responding closely and efficiently to people's needs and desires.

Contemporary designers draft complex geometric forms using 2D and 3D modeling software, a process known as computer-aided design (CAD). These virtual designs are then translated by computer-aided manufacturing (CAM) hardware to produce the material object. CAM first appeared in the automotive and aerospace industries in the 1960s, but is now widely used to produce a range of objects, from industrial parts to entire buildings. Computer numerical control (CNC) machines, an example of CAM hardware, use a variety of cutting and drilling methods to shape steel, wood, or other materials into the forms drawn in a CAD file. CNC revolutionized manufacturing by producing complex 3D forms efficiently, accurately, and with less human labor. Rapid manufacturing, another approach, "prints" three-dimensional objects directly from a CAD file, building them slice by slice in a vessel of liquid resin or powdered nylon that hardens when struck by a laser beam. The object that results is an exact copy of the computer model, produced without any material waste. These technologies have the potential to quickly and efficiently mass-produce customized designs. Because curves are as easy to make as straight lines, the structural and aesthetic possibilities are as open as the designer's requirements and imagination.

The installation in the east wing of the Architecture and Design Galleries presents approximately twenty-five works that exemplify the diversity of the digital technologies employed by today's most inventive designers. In addition to objects directly produced by the computer through robot-controlled processes like CNC milling and rapid manufacturing, the display also includes objects that were designed digitally, including laser-cut models, interactive graphic displays, CAD renderings, and digital typography and magazine layout. Jaguar's curvaceous E-Type Roadster, the body of which was mathematically determined through formulas in 1961 that anticipated the use of computers, is presented as a predecessor to the digitally designed and manufactured objects on display. We anticipate that these modes of production will continue to shape the future of design.

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*Organized by Paola Antonelli, Curator, and Christian Larsen, Curatorial Assistant, Department of Architecture and Design.*

Demakersvan (est. 2004), Jeroen Johan Verhoeven. *Cinderella Table*. 2004. Birch, 31 1/2 x 52 x 40" (80 x 132.1 x 101.6 cm). Gift of Marie-Josée Kravis in honor of Patricia Phelps de Cisneros

[http://www.vam.ac.uk/collections/furniture/stories/cinderella\\_table/index.html](http://www.vam.ac.uk/collections/furniture/stories/cinderella_table/index.html)