

# Let's Get Digital



When you have a collection of over 1.3 million rare books, manuscripts and periodicals, many of them so old and fragile they require care approximating that administered in a cardiac ICU, how do you get these materials into the hands of the scholars and researchers who need them, if the scholars and researchers can't come to you? The Smithsonian Institution Libraries (SIL), the book and periodicals collection of the Smithsonian Institution, hopes it has found the answer with its Digital Imaging Center (DIC).

"We have thousands of items that are extremely rare," says Tom Garnett, the SIL's assistant director for digital libraries, "materials that we can't even let out on interlibrary loan because they're too fragile. And we'd been grappling for ways to make these books more widely available to scholars and the general public." So, two years ago, the Smithsonian Library set up the Digital Imaging Center, to photograph and scan selections from its collection, digitizing books and periodicals in their entirety, and making these materials available via SIL's Galaxy of Knowledge Web site, at <www.sil.si.edu>.

Garnett says that he and the staff overseeing the SIL imaging center learned their craft "largely by the seats of our pants," and that digitizing rare books and manuscripts that may be hundreds of years old presents numerous special problems. "Scanning a rare book has its own unique set of challenges," explains Garnett. For example, many of the books and manuscripts could be damaged by overexposure to light,

which can cause text and illustrations to fade, or degrade some types of paper. "You need a lot of light to get decent scans, though, so we're using Videssence fluorescent lights, low-temperature 330 watt copy lights that won't damage the materials."

Many old books also can't be opened and put flat down on a scanner, for fear of breaking their spine and bindings. To alleviate this problem, technicians at the SIL have constructed an adjustable bookstand that will hold the volumes open at any angle so they can be photographed without damage. The books are shot using a Hasselblad with an 80mm or 150mm lens and a Phase One Power Phase digital scanning back, then processed and burned onto CD-ROMs through a 350 MHz Power Macintosh G3. For materials that can be flatbed-scanned, the center uses a Umax Mirage 115e, also hooked up to a Power Mac G3.

All images are shot at the maximum resolution the equipment will produce, allowing creation of a "super .jpg" from which lower-resolution files can be pulled for other uses, such as making prints or for posting on the Web. Garnett says having one ultra-high-resolution show ensures that, whatever the demand for the image may be, they can always extract a file of the needed resolution. "We never want to have to go back and do the scan a second time," he says. There is a downside, though, as one CD may only hold four or five pages worth of high-res JPEGs and 100 CDs may be needed to digitize a single tome.

But though the center may be purchasing its blank CDs by the truckload, with over 1.3 million vol-

umes in the SIL collection, Garnett says, "We can't digitize the entire library; that would take centuries. We look for things that aren't readily available in print or some other medium," such as online exhibits or exhibits at other of the Smithsonian's 24 museums and research centers.

Of the DIC's work to date, Martin Kalfatovic, SIL's digital projects librarian and head of the new-media office, says, "So far, we've scanned maybe 11 books total and 400 or so pieces of trade literature, which comes out to around 4,000 to 5,000 images altogether." The SIL also plans to keep everything scanned online in perpetuity, with the Galaxy of Knowledge site expanding in size to eventually become a library branch in cyberspace, serving the public alongside SIL's 22 brick-and-mortar branches.

So, though they may be toiling away on the cutting edge of technology, the SIL's digital imaging efforts are still upholding the institution's original mission. "The Smithsonian was created through a bequest of James Smithson, an English scientist who left \$500,000 in his will in 1846 to found an institution in the U.S. for the 'increase and diffusion of knowledge among men,'" says Kalfatovic. "And that, through the years, has been our goal."



## LIBRARY RETURNS

THE SMITHSONIAN LIBRARY HAS SET UP A DIGITAL IMAGING CENTER FOR PHOTOGRAPHING ITS PRICELESS BOOK COLLECTION.

BY HAL STUCKER



ALL PHOTOS THIS PAGE © THE SMITHSONIAN INSTITUTION