The Electronic Beowulf

“Beowulf,” the great Old English poem, survives in a single manuscript that was badly damaged by fire in 1731, and it deteriorated further before being rebound in 1845. Making innovative use of a digital camera, ultraviolet fluorescence, and fiber-optic backlighting, Kevin Kiernan (English) set out in 1993 to rescue this time-honored text and literally bring it to light for scholars to study. The result of his work was a two-volume compact disk called The Electronic Beowulf, published in 1998.

With support from the UK Center for Computational Sciences, Kiernan assembled an archive of digital images that provide not only high-quality facsimiles of what is readily visible in the manuscript, but also of hundreds of letters and parts of letters covered by frames designed to preserve the fragile text after the edges were seared in the fire.

Kiernan’s work has virtually changed everything about the way scholars study what is considered the most important work of Old English literature. Now, scholars interested in the construction of the original gatherings of the manuscript are able to place once-adjoining leaves side by side again, or examine in great detail the color and texture of the vellum leaves by magnifying the images. And with the help of image processing programs, faded passages are now more legible.

This project won the 2001 Beatrice White Prize awarded by the English Association (United Kingdom) for outstanding scholarly work in the field of English literature before 1590.

Saxophone Research

If you ask Miles Osland, UK professor of saxophone and director of jazz studies, how his research is coming along, he might smile, but he also has a ready answer.

“Our research focuses on developing and using new techniques in our performances, and combining these techniques in musically exciting ways,” says Osland, the recipient in 2004 of a $24,000 UK Research Support Grant. His project was titled “Development, Documentation and Dissemination of New Works for Saxophone.”

Osland used this grant to commission three works by major international composers who have proven themselves to be “technically adventurous,” he says. The three commissioned works were “The Concerto for Alto Saxophone and Wind Orchestra,” by English composer Mike Mower, “MOSAX Overdrive for Saxofonquartett” by Sweden’s Anders Åstrand, and “Four Miniatures from Brazil” by Brazilian composer Hudson Nogueira. All three pieces were performed in 2005 at UK.

“These performances were very well received,” Osland says. “Musicians can be researchers too.”
Non-Toxic Art

Making art—printmaking, for example—is challenging. It can also be toxic.

Toxic elements first seeped into the printmaking world with the invention of oil paint, says UK art professor Gerald Ferstman. New, often hazardous, chemicals were needed to break down oil-based inks. Common household chemicals like turpentine and nail polish remover are among the more than 100 toxic substances used by traditional printmakers. Some of the known side effects from continuous exposure to these chemicals include birth defects, central nervous system damage, asthma and emphysema, and systemic poisoning of the lungs, liver, kidneys, and heart.

This danger is what prompted Ferstman and his colleague in art, Ross Zirkle, to create non-toxic techniques to keep their students safe and keep their craft alive, an art that dates back to the Middle Ages when warriors had artisans etch intricate designs on weapons.

“Ross’s grandfathers were both pressmen for newspapers,” says Ferstman. “One developed dermatology problems from handling inks and eventually died of cancer.”

The researchers experimented with a water-based ink that can be used in all printmaking techniques and worked to improve and adapt new non-toxic products. Zirkle’s research centered on waterless lithography. The result was a “very workable” system of ink and modifiers that provides a safe, economic and reliable alternative to oil- and solvent-based lithography.

“The bottom line is, nobody should have to risk their health to make art,” Ferstman says.

A sad note: In March 2007, Ross Zirkle (left) died after a nine-month battle with cancer. A UK faculty member since 1997, he received UK’s Great Teacher Award in 2006.