Digital Technology
Putting UNL at the Forefront of Humanities Research

By Vicki Miller

*I*magine perusing millions of words in Willa Cather's novels to identify characteristic words or phrases. Scholars might spend years teasing out such insights into the Pulitzer Prize-winning author's work. Or they soon might turn to new digital text analysis tools developed at the University of Nebraska–Lincoln for quick answers.

Katherine Walter co-directs UNL's Center for Digital Research in the Humanities.

Digital technologies are driving advances in humanities scholarship and UNL is an emerging leader in a new field that is transforming the depth and breadth of this research.

Computer-based technologies are changing how scholars access, analyze, conceptualize, share and publish their research. From history and literature to anthropology and languages, humanities scholars are tapping digital tools to ask new questions, analyze diverse subjects and discover intricate, sometimes elusive connections. Integrating cultural, demographic, economic, environmental, geographic, historical, political or literary influences provides a broader context and a richer understanding of any subject.

In less than a decade, UNL's digital humanities endeavors have grown from an effort to place a couple of projects online to a universitywide initiative led by the Center for Digital Research in the Humanities. With more than 35 active projects involving 50 faculty from nine departments and the libraries, the center boasts extensive scholarly and technical expertise, plus graduate and undergraduate students and collaborations with scholars and institutions nationwide.

CONNECT. EMPOWER. GROW.

N
ALUMNI®

"We started by looking at how the digital medium was changing the way people read and think about text," explained Katherine Walter, center co-director and chair of digital initiatives and special collections for UNL Libraries. "We decided we really needed a place central to the humanities that would be a resource to faculty who wanted to do digital research."

Collaboration is essential to the center's success. UNL Libraries and the College of Arts and Sciences jointly organized the center, which works with faculty in different disciplines to develop digital content and tools. It offers faculty fellowships to pilot digital projects and workshops that encourage digital scholarship.

"This collaborative nature makes this center like no other."

An interdisciplinary focus strengthens UNL's scholarship and capabilities, Walter said. Scholars from different disciplines team with archivists, librarians, publishers, digital specialists and students to enhance the various projects' context, content and usability.

"This collaborative nature makes this center like no other," said Joan Giesecke, dean of libraries. "We're building a scholarly community as well as our capacity to work with these new technologies. It's a joint effort that promotes and enables humanities research."

The chance to "cross some of these disciplinary boundaries" factored in historian William Thomas's decision to come to Nebraska. An expert in using digital technologies to study history, Thomas headed the Virginia Center for Digital History as a professor at the University of Virginia before joining UNL in 2005. With a seed grant from UNL's Office of Research, he and computer scientist Steve Goddard are developing a system that analyzes historical processes and infers relationships between events.

"I believe that this sort of collaboration is essential to the next wave of digital scholarship and it's one of the reasons I came to UNL," Thomas said.

UNL's strong commitment to humanities research and enhancing scholarship are rooted in an ambitious goal of becoming a nationally distinguished humanities center. Funding from UNL's Program of Excellence, UNL Libraries, College of Arts and Sciences and Office of Research has been leveraged to hire new faculty and staff with digital expertise and expand research and instructional capacity. This internal investment has helped attract more than $1.4 million in external funding.

Kenneth Price, Hillegass University Professor of 19th-century American Literature, works with the center as both co-director and a scholar with one of its marquee projects – the Walt Whitman Archive. While embracing digital technology "probably doesn't come naturally" for many scholars, he said, it creates research opportunities that previously were often impossible. It also vastly expands the availability of scholarly research.

Digital scholarship's definition is as diverse as the scholars and projects involved. The most visible examples tend to be Web sites but digital research is far more complex. Scholars may use or develop computer-based tools such as geographic information systems, interactive games

or analysis, visualization, mapping or other software or technologies. Regardless of technology, the common goal is expanding the capacity to conceptualize, explore, understand or present this work.

Digital scholarship is far more than digitizing text and images, Walter said. "Somebody needs to make sense of these materials. The scholars provide the interpretive framework."

Every project the center tackles expands UNL's overall research capacity, Walters said. Tools developed for a specific project often are adapted to expand research in other disciplines.

That's the case with Token X, a powerful new text analysis software developed by Brian Pytlik Zillig, an assistant professor of libraries. UNL has licensed this tool, which is available free to scholars.

Token X is being piloted on the Willa Cather Archive Web site, one of the center's first and best known projects. Within a year, it will be possible to analyze every word of all of Cather's novels – a once daunting task – relatively quickly using this new tool.

UNL's digital humanities work emphasizes high-quality research of scholarly interest. But making it accessible on the Web draws attention from teachers, college students and ordinary people.

For example, the Whitman Archive averages about 100,000 hits a week. "That gives you a sense that you are really reaching a lot of people," Price said, noting that press runs for scholarly books can be as small as 500 copies.

Books have limited availability, can be expensive and cannot be updated as new information becomes available. A digital project as comprehensive as the Whitman Archive is always in progress, Price said. "It seems worthwhile to release it to the public, even if it has some warts, because this information is not available elsewhere."

Digital scholarship is expanding learning opportunities for UNL graduate and undergraduate students, who work and study with scholars and librarians. By involving students, the center's faculty and staff are training the next generation of digital humanists.

"I love the way we can get students involved in many of these cutting edge projects," Walter said. "It's a fabulous experience and they are picking up skills they can use throughout their careers."

UNL's strides in digital humanities scholarship are turning heads around the country.

In a relatively short time, "UNL's expertise and infrastructure has just skyrocketed," Price said. "We've gone from being respectable and interested in digital humanities research at Nebraska to being widely perceived across the U.S. as taking bold steps and establishing leadership in this field." 🔔

Railroad History Goes Digital

By Gillian Klucas

*T*apping the power of modern digital technology, University of Nebraska–Lincoln historian William Thomas is gaining a deeper understanding of the impact of an earlier, equally transformative technology – railroads – on 19th-century America.

This project will help Thomas and others identify social consequences related to the railroad, such as demographic and environmental changes, immigration patterns, women's political involvement in the West and African American migration patterns.

To do that, Thomas is creating a geographic information system (GIS), a digital atlas that tracks the growth of the entire railroad network across space and time. To this atlas, he is linking primary historic documents gleaned from other scholarly work and historic archives. Once developed, researchers can track the railroad's progression over time and search for documents linked to a particular place or time for further investigation.

Historian William Thomas is developing a digital atlas to track railroads through time and space.

These powerful linking and search tools are helping researchers identify otherwise obscure connections.

"Applying the new technologies to the questions of history will undoubtedly help historians see things we couldn't see before. That's what tools are good for," said Thomas, the John and Catherine Angle Chair in the Humanities. For example, by linking payroll records to this atlas, Thomas hopes to understand what it was like to work for the railroad. He's already learned that, though the Baltimore and Ohio Railroad originated in slave state Maryland, it hired only free blacks and a diverse crew of white immigrants.

To study western migration, Thomas is also linking Burlington Northern Railroad land sale records to his atlas, beginning with the Webster County (Nebraska) records of land agent Charles Cather – Willa's father. The railroad sold vast amounts of land and kept detailed records of who bought the land and where they came from. Studying those records in relation to a GIS atlas will tell researchers much about

things such as who the early migrants were and whether they clustered ethnically, providing clues about how and why people moved west.

"Without this technology, it would be impossible to try to have at your fingertips a full, multidimensional atlas of a subject like railroads and its instrumental role in the development of modern America," he said.

Thomas has used digital technologies to look at issues as diverse as the Civil War and television's influence on civil rights. Before joining UNL in 2005, he headed the Virginia Center for Digital History at the University of Virginia. There he created a digital collection focusing on Virginia's Eastern Shore, which he uses to understand the railroad's contribution to the region's growth as an agricultural powerhouse decades later.

These powerful linking and search tools are helping researchers identify otherwise obscure connections.

Thomas said UNL's leadership as a transportation center provides a tremendous opportunity to further his research on railroads. "Trying to understand the transformation the railroad brings to the Great Plains and document it as a system with all of its social effects, as opposed to a kind of corporate history, is challenging," Thomas said, but digital technology makes it possible. He collaborates with UNL's Center for Digital Research in the Humanities on this project. 🔔

Walt Whitman on the Web

By Vicki Miller

*U*NL English professor Ken Price calls Walt Whitman "the poet of democracy." So it's fitting that digital scholarship by Price and others is making this quintessentially American writer's works widely accessible for the first time.

UNL scholars and librarians are collaborating with colleagues elsewhere on a comprehensive online archive that is receiving international acclaim. The Walt Whitman Archive (www.whitmanarchive.org) makes the poet's huge body of work easily accessible on the Web. The archive is primarily for scholars but attracts students, teachers and Whitman fans worldwide.
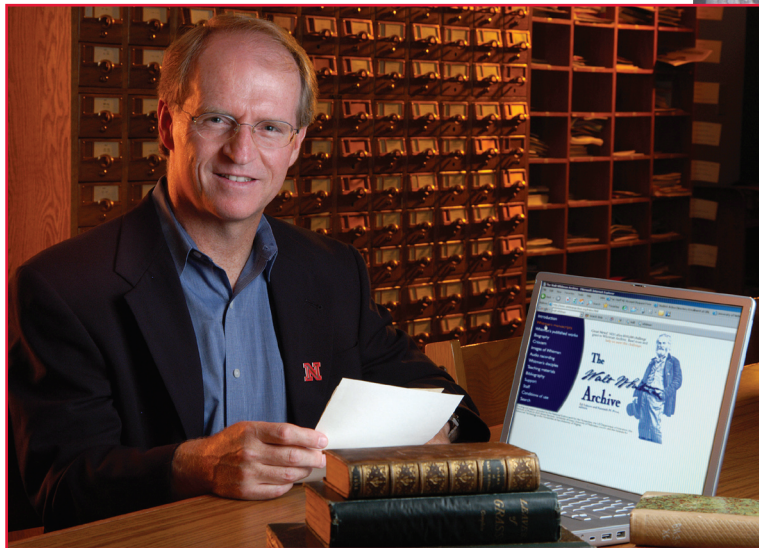
English Professor Ken Price is making the far-flung works of poet Walt Whitman widely accessible.

"Whether you're in Montana or the Ukraine, you can pull up the original manuscript images and start making discoveries for yourself," said Price, Hillegass University Professor of 19th-century American Literature and archive co-director with Ed Folsom, a University of Iowa English professor.

Whitman's international stature, vast body of work, evolving style and obsession with rewriting fit well with the dynamic nature of an electronic archive, which can be easily expanded, updated or searched. Compiling Whitman's diverse writings in one spot allows scholars to examine his work as never before.

Tracking down manuscripts is challenging. Whitman's roughly 80,000 known manuscripts are housed at more than 70 institutions. More than 30 sites house his poetry manuscripts alone. That made comprehensive scholarly research nearly impossible before the archive team's ground-breaking work.

The team collected and is editing copies of original poetry manuscripts from all 30-plus sites. Scholars and librarians collaborated to develop the first integrated guide to Whitman's poetry that lists all manuscripts and where they are housed and makes copies available online.

"Whether you're in Montana or the Ukraine, you can pull up the original manuscript images and start making discoveries for yourself."

"Work on Whitman's manuscripts is in its infancy because people just haven't been able to get access to the materials," Price said.

This pioneering work, which has broad applications in digital scholarship, earned the C.F.W. Coker Award from the Society of American Archivists in 2006. Price led the project along with Katherine Walter, chair of the UNL Libraries' digital initiatives and special collections, and Folsom. Grants from the National Endowment for the Humanities and Institute of Museum and Library Services support this work.

The team achieved another major first in fall 2005 when UNL received a $500,000 NEH "We the People" challenge grant for a permanent archive endowment. Price is working with the University of Nebraska Foundation to raise the $1.5 million needed to receive the full amount. Contributions can be made at the archive site.

"Raising $1.5 million is a huge task but this is an opportunity not to be missed," Price said.

Price believes this is the first American literary project to receive a "We the People" grant, which focuses on the nation's founding and principles of democracy. It's a good fit.

"Whitman is the poet of democracy," he said. "He's woven into the fabric of everything it means to be an American: who we have been, who we are and who we might be in the future." 🔔

Electronic Archives

*T*he UNL Center for Digital Research in the Humanities partners with diverse scholars and institutions across campus and the nation on projects. Web-based projects widely known for their scholarship, content, design, functionality and navigation include:


The Willa Cather Archive (http://cather.unl.edu): One of the center's first projects, this is a rich, useful, accessible site for studying Cather's life and writings that draws interest from scholars internationally. It includes many of Cather's writings, biographies, scholarship and a large photo collection. Project partners with the center are the UNL English department's Cather Project and the University of Nebraska Press.

Journals of the Lewis and Clark Expedition Online (http://lewisandclarkjournals.unl.edu): This site features searchable text of the celebrated Nebraska edition of the Lewis and Clark journals, edited by UNL history professor Gary Moulton. This is the most accurate and inclusive edition ever published. It's a joint effort of the University of Nebraska Press, UNL's Center for Great Plains Studies, Libraries, the Cather Project and the center.
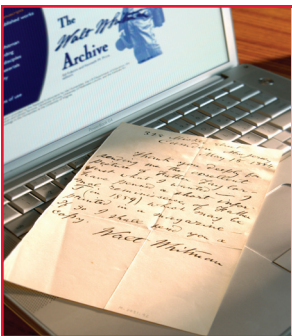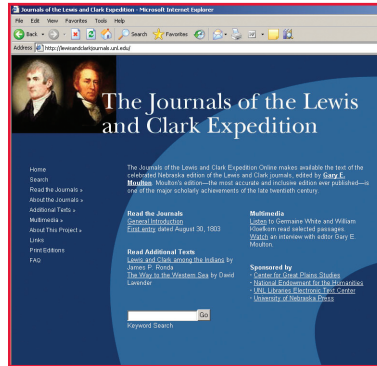
The Walt Whitman Archive (http://www.whitmanarchive.org): This comprehensive site dedicated to America's most influential poet strives to make his vast works easily and conveniently accessible. The archive is a joint effort of numerous universities and scholars including the center. UNL conducts much of the scholarly and technical work; the University of Virginia hosts the site.

Omaha Indian Heritage Project (http://omahatribe.unl.edu): This site provides an online catalog of Omaha artifacts and photos, drawn from international sources, making them accessible to the Omaha tribal members and the public. Project partners with the center are University of Nebraska State Museum, UNL Libraries and the Nebraska State Historical Society in cooperation with the tribe. 🔔

A STRONGER
ALUMNI.
A GREATER
UNIVERSITY.
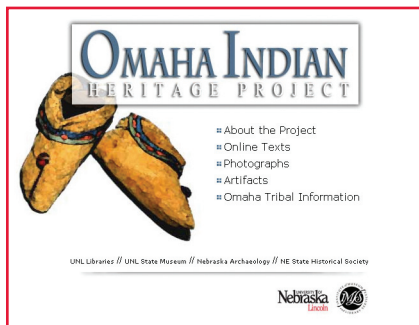
N ALUMNI®

Wick Alumni Center
1520 R Street
P.O. Box 80129
Lincoln, NE 68501-0129

The **Palladian Literary Society** was founded in 1871 by 20 young men and five young women a month after the University of Nebraska opened its doors. Members gathered weekly for social and intellectual activities, including plays, orations, debates, recitations, music, promenades and refreshments. The group was active in one form or another until the late 1960s and alumni held a reunion as recently as 2000. In the beginning, meetings were held at University Hall, which featured a bell tower. Today, that same bell resides in the Holling Garden at the Wick Alumni Center.

Harvey Perlman, '63, '66
Chancellor

Ed Paquette
Executive director, Alumni Association

Prem Paul
Vice Chancellor for Research

Andrea Wood Cranford, '71
Editor

Vicki Miller
Gillian Klucas, '91
Writers

Kevin Wright, '78
Clint Chapman
Graphic Design

Palladian is published quarterly by the Nebraska Alumni Association in cooperation with the University of Nebraska-Lincoln Office of the Vice Chancellor for Research on current topics of interest to alumni members, friends and peer institutions of the University of Nebraska-Lincoln.

UNIVERSITY OF
Nebraska
Lincoln
Pioneering new frontiers.

N ALUMNI®