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[Left to right] College of Design Professor Tim Buie, student Barbara Nee, Associate Professor of Computer Science R. Michael Young, and students Rhys Harwell and Jessica Frucht, discuss a class gaming project in the Collaboration Room named in honor of Lucinda Hardwick MacKethan in the D. H. Hill Library’s Learning Commons.

Photographs by Becky Kirkland and Daniel Kim, NCSU, unless otherwise noted.
Please direct queries or feedback about this issue to terry_crow@ncsu.edu.
What do video games have to do with NC State’s teaching, learning, and Libraries? More than most people might realize. Video games have come a long way in terms of content, complexity, and popularity since their emergence in the early 1970s. Today, gaming is a multimillion dollar industry that attracts a very broad audience—male and female, young and old. While games designed purely for entertainment are pervasive and account for a large portion of the current gaming market, educational or serious games and 3D online environments represent an exciting and growing area of game research and development. North Carolina State faculty and students are actively involved in the study and creation of serious games, focusing on new modes of entertainment and interaction in digital media.

“Serious games are typically described as the application of gaming technology in contexts other than entertainment,” says R. Michael Young, associate professor of computer science at NC State. Young is one of many faculty currently engaged in game development and research on campus. Young “looks at the ways artificial intelligence techniques can be put behind game engines to make games more adaptive to users. That often means creating educational games where the experience is tailored to specific learning goals” or a player’s background or interests.

Young is very active in both the local and national gaming research communities. In addition to his teaching and research efforts, he is director of NC State’s Digital Games Research Center and also serves as editor-in-chief of the *Journal of Game Development*. Young and other NC State faculty also maintain connections with several area gaming industry representatives through the NC Serious Games initiative, based in the Research Triangle area. In fact, the Triangle is home to a very large concentration of nationally known gaming companies, including Virtual Heroes and Emergent Technologies. Many of these companies are leading the nation in innovative game development, and they serve as potential employers to NC State graduates.

Young teaches a number of courses related to game design, including Advanced Computer Game Projects (Computer Science 482), taught each spring in coordination with a studio class on 3D modeling and animation, 3D Game Development Studio (Industrial Design 500) taught by College of Design Professor

Students set up for the class session on game development held in the D. H. Hill Library.
Computer science and industrial design multidisciplinary student teams pitched their game ideas to their professors and classmates at a special Gameday class session held at the D. H. Hill Library in January 2008.
**Tim Buie.** The students form multidisciplinary teams to build semester-long game projects, then show their work at the annual “Game Development Showcase” on campus.

In January 2008 Buie and Young held an evening class session in the D. H. Hill Library, where their computer science and industrial design multidisciplinary student teams pitched their game ideas to their professors and classmates. Each student team described its game idea in detail, provided concept art and color palettes, discussed the technical and design challenges anticipated, and proposed solutions to those challenges. Following the presentations, the students and faculty played multiplayer games on the Libraries’ Xbox 360 gaming consoles to help the students get to know one another better and let them blow off a little steam after their rigorous pitch session.

The D. H. Hill Library has been providing video game support to faculty, staff, and students since the opening of the Learning Commons on March 12, 2007, featuring the most popular gaming consoles—Microsoft Xbox 360, Sony Playstation 3, and Nintendo Wii—as well as a small and growing collection of

“Students no longer isolate study from social life and play.”—**R. Michael Young**
popular game titles. There is also a small collection of games at the Design Library, and the Special Collections Research Center is seeking to collect examples of computer games from previous decades, to enable scholars to examine their evolution from a historical perspective. Librarians are collaborating with DELTA (Distance Education and Learning Technology Applications) on the development of the NC State “Wolflands” island in Second Life, an experimental virtual campus. Another project, an interactive 3D online tour of the D. H. Hill Library that could also provide the backdrop for a variety of gaming activities, is in the works as a partnership with Young and some of his students.

“The Learning Commons is an amazing thing for the Libraries to do,” says Young. “Students no longer isolate study from social life and play. When the library reflects the way they live, they’re more comfortable using all the resources” made available to them. “So, when we build something like that, the university is showing the students we understand how they live.”

“People like me learn to do things with manuals,” Professor Buie explains, “but our current students like to use videos” and other media. “The next generation will use simulations for learning, practicing, and training,” he says, citing the important interactivity that games and simulations offer. The appeal of that type of interactivity “is not so much to keep us entertained, but just involved. We’ll likely retain learning if we’re involved.”

“Games are a narrative, the same as a book, film, or magazine,” adds Buie. “Why should they not be included” in library collections? “It’s another art form, and I see art as a way to learn something. Fine art touches us emotionally and involves us, inspires us, and motivates us. I haven’t seen a game done as a piece of fine art yet,” Buie emphasizes, but he notes “it took film twenty years” or so to gain the heightened artistic levels the medium finally achieved. For Buie and many others, games are a vehicle with a powerful potential to engage and connect people.

“Most people think about video games when they talk about ‘games,’” says Adriana de Souza e Silva, assistant professor with NC State’s Department of Communication. De Souza e Silva’s research focuses on how mobile and wireless technologies change perceptions of space, particularly urban spaces. “Critics of video games say that players lose their connection with ‘real life,’ but mobile games can actually get people out into the world, get them to rediscover their physical space and create local connections.” She is looking beyond stereotypical ideas of what video games are and is working to understand games as social spaces.

As de Souza e Silva explains, there are a number of mobile devices available today, such as Web-enabled cell phones or the iPod touch, that connect easily to the Internet. With a growing number of people in urban and rural areas connecting to and accessing an enormous body of information, de Souza e Silva wonders: “how does this affect them?” Through her research interests in communication, she first discovered “location-based” mobile games. Some of these types of games use GPS devices, others use Web-
enabled phones or other mobile devices to facilitate game play. With mobile games, players can interact with each other using their real-life positions and location information. “This can change what we can do with the Internet. It doesn’t make sense for us to talk about physical and virtual spaces as separate,” she adds.

In addition to her current research projects, de Souza e Silva is also discussing developing “a location-based game on NC State campus,” where players “would use cell phones to create location-based awareness.” This particular “contextualized learning” project would be a collaborative effort with faculty from the Department of Landscape Architecture.

“It is important to link (gaming) content among disciplines and programs. North Carolina State has the potential to move forward in this area and to become a leader in the area of game study research.”

De Souza e Silva is also director of the Mobile Gaming Research Lab at NC State, which promotes interdisciplinary and interinstitutional research on games in general and mobile games in particular.

Leonard Annetta, assistant professor in science education, is another faculty member deeply engaged in game research and interdisciplinary collaboration. He currently leads several grant-funded research projects on serious games and is passionate about the teaching and learning potential of this new medium.

Annetta’s interest in serious games research “lies in the fact that people are knee-deep in games, not necessarily serious games, but they’re playing. I want to . . . find ways to keep the excitement and entertainment aspect, but also embed education into these games.” Annetta’s background is in distance learning, and he is interested in using “massively multiplayer online gaming” or MMOG environments, as a framework for how a classroom environment can be set up online.

Annetta teaches a number of courses within the 3D virtual environment Wolf Den, which is built on Active Worlds. “We host an [Active Worlds] universe on campus in the College of Education,” which limits the class space to participants registered by NC State. This added control “allows me to conduct research within my classes.”

In addition to teaching, Annetta is involved in a number of game-related efforts, including his widely acclaimed HI FIVES project that
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involves many partners from across campus, including DELTA and the Kenan Institute for Engineering, Technology and Science. The HI FIVES project is developing sixty competitive simulations that will teach information technology-driven science to North Carolina students in grades five through nine, using inexpensive, online multiuser simulation software. The project is providing valuable new skills and first-hand experience to students as well as science educators.

Annetta hopes that more NC State faculty will become interested in using gaming technologies in their teaching. Young also hopes that more faculty will explore serious games as they relate to their own teaching, learning, and research. “Instructors need to know more about the potential for serious games before they can see how serious games can help them in their instruction. Off campus, a good source of information on serious games is the Serious Games Summit,” a national annual event where individuals report on case studies of serious games developed in a range of disciplines, says Young. On campus, the Digital Games Research Center’s Future of Games speaker series provides valuable information on this subject to interested faculty.

“Students are using iPods and cell phones to get their information, and we’re sending them mail in the mailbox.”—Leonard Annetta

Design Library Images Available in ARTstor

BY KAREN DEWITT, DESIGN LIBRARY

Images from the Harrye B. Lyons Design Library Image Database are now available as an institutional collection in ARTstor. Faculty and students who use ARTstor in their classes can now easily access the Design Library images and incorporate them into presentations. In addition, accessing the Design Library Image Collection through ARTstor gives patrons using this collection much more sophisticated presentation tools.

The Design Library Image Database has more than 40,000 digital images covering art, architecture, landscape architecture, industrial design, and graphic design. The collection is primarily a teaching collection for the College of Design and was originally based on the slide collection in the Design Library. Many of the images are unique or difficult to find; the collection is particularly strong in graphic design and also has a substantial collection of architecture images. Barbara Brenny, the visual resources librarian, continues to add digital images to enrich the collection.

ARTstor is a digital image database with over a half-million images and sophisticated organizational and presentation tools for users. Founded by the Andrew W. Mellon Foundation, ARTstor works closely with museums and other image providers and has collections that include images from art, architecture, and the humanities and social sciences. The collection also includes a number of Quicktime VR virtual reality movies that recreate the interiors and exteriors of a number of iconic buildings and locations. In addition to images and Quicktime VR, the ARTstor database provides users with tools to create folders and groups of images that interest them and to use these images in presentations or classroom teaching. Using ARTstor’s Offline Image Viewer, faculty and students can create image presentations that they can load onto a flash drive or other portable hardware and can add their own images and text into a presentation.

Users accessing ARTstor from campus or after logging in and being identified as NCSU patrons now have Design Library images automatically included in any search in ARTstor, making it much easier for faculty or students to include these images in presentations. Alternatively, users also may limit searches to the Design Library collection. All Design Library images are available for use with the Offline Image Viewer or any of the other presentation or organization tools in ARTstor. Design Library images are only available to North Carolina State University affiliates and will not become part of the larger ARTstor collection.
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The Water Garden, a small office park off Glenwood Avenue in Raleigh, served as an example of building in harmony with the natural environment.

Its Garden Gallery featured the work of North Carolina artists and faculty from the NCSU College of Design and hosted legendary exhibit openings.

Xtreme Collecting

By Lisa Carter, Special Collections Research Center

On November 5, 2007, many in the NCSU Libraries noted a story in that day’s News and Observer reporting renowned landscape architect and NCSU alumni Richard Bell had sold and was leaving his office and home, the Water Garden, within the next two weeks. In the article Brian Starkey, a landscape architect who had worked with Bell, observed “there’s a legacy there that’s not going to be preserved” [see Sarah Lindenfeld Hall, “Water Garden’s Steward Closes Up Shop,” Raleigh News and Observer, November 5, 2007]. While the Libraries could not save the eleven-acre Water Garden, the Special Collections Research Center could preserve the legacy of the work, creativity, and collaboration that went on there.

The next day Greg Raschke (associate director for collections and scholarly communication), Lisa Carter (head, Special Collections Research Center) and Catherine Bishir (curator of architecture special collections) paid a visit to the Water Garden to ask Bell about the future of his drawings and papers. At that point, the Bells

Lisa Carter: “Collecting, the extreme sport of archiving.”

Emily Schmidt: “It was an adventure to leave the library to go to a place by a lake in the middle of the woods and discover such a wealth of architectural history stuck in corners of rooms and outdoor sheds.”

Jamie Bradway: “Next time I’ll bring more staff, some bag weights to hold open drawings, and a good vacuum.”
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Dani Nation [on right]: “The transition between the present, past, and the materials in the box is visceral, and the meaning of the materials is enhanced through this tangible connection.”

Sarah Rice Scott: “The amount of material was overwhelming, but we were grateful for the chance to gather and examine this valuable collection.”

Bradway: “I generally expect anything stored in a shed to be a lost cause, but it wasn’t the case with the Bell collection.”

Richard Bell’s offices at the Water Garden provided a start for many other successful landscape architects.

were pretty much packed up and ready to leave the Water Garden permanently. Unaware that his records might have research value for future architecture scholars, Bell was at a loss about what to do with the large quantity of bulky drawings that represented his accumulated life’s work, innovation, and applied professional philosophy. His remaining drawings had been set aside and awaited disposal. On the urging of the representatives from the NCSU Libraries, Bell agreed to give this documentation of his career to the Special Collections Research Center so it could be preserved for long-term use.

A week later, a crew from the Libraries’ Special Collections Research Center and the Preservation Department arrived at the Water Garden to pick up the Richard Bell Collection. The group of five staff from the Libraries needed to re-roll and pack the drawings to transfer them to the archives. During the process, the crew faced several difficulties presented by the large, unevenly rolled materials.

The drawings were not in protective enclosures, so effort was made to place as many as possible in empty tubes found in storage areas. Many groups of drawings would not fit in the
tubes and had to be boxed as carefully as possible to avoid further damage during the move. Some materials were no longer in prime condition and some were folded and could not be unrolled. As is the case with architectural materials, the drawings could not be identified without unrolling them, yet unrolling them outside of the preservation lab risked damage to the materials. However, by the end of the day, approximately 10,000 oversized, architectural drawings and blueprints, representing possibly 500 of Bell’s projects, were packed into the Libraries’ van and transported to its Satellite Storage facility.

*Linda Sellars:* “Water Garden was such a lovely setting in which to be packing up a collection that I was often wondering about what other landscapes were represented in the drawings.”

This challenging opportunity attests to the importance of collaboration, ingenuity, and a clear sense of purpose in building an extraordinary research collection of primary source materials. Individuals throughout the Libraries, familiar with the Special Collections Research Center’s collecting strategies, alerted staff to the opportunity to acquire this important collection. Special Collections and Preservation staff stepped forward to roll up their sleeves and tackle the problems involved in rescuing this collection and planning for its long-term preservation. Extensive team problem solving was required to pack and move the collection in one short day with one cargo van that appeared much smaller when it was full of the Bell Collection. Throughout, the shared understanding of how important these materials would be to the students and faculty of NC State, as well as scholars around the world, propelled the team to find a solution that would result in long-term access to these materials.

This hands-on commitment to collecting unique, rare, and historical information in support of the teaching, learning, and research mission of the university and Libraries advances the Special Collections Research Center as a distinctive signifier of the Libraries’ pursuit of excellence. Special Collections purposely builds its research collections in targeted areas of strength. Particular attention is paid to areas in which NC State has made and is making a marked contribution to the development of a field.

In support of the impact and reputation of the university’s College of Design, the NCSU Libraries serves as the repository for important architectural and environmental design materials and collections in the state of North Carolina [see *Focus*, volume 27.3 (2007): 12–15].

*Linda Sellars creating a preliminary inventory of the collection as it was boxed up for moving.*
includes papers, drawings, and records of prominent architectural firms in the state and region; papers and records of prominent architects, with an emphasis on major modernist architects; the papers and drawings of prominent landscape architects; and golf course designers. In this context, the Richard Bell Collection will further distinguish the NCSU Libraries as a major research destination for scholars of the built environment.

The Libraries welcomes support for such important collecting initiatives and encourages other donors to expand the research center’s collections. Those who would like to support the processing, growth, preservation, and digitization of these resources should contact Suzanne Weiner, associate vice provost for library advancement at suzanne_weiner@ncsu.edu or Lisa Carter, head, Special Collections Research Center, at lisa_carter@ncsu.edu or by calling (919) 515-7188.

The Richard Bell Collection arrives at the Libraries’ Satellite Storage Facility.

The donor, Dick Bell, Nation: “With Dick Bell, it was the feeling of the artist that came across in his surroundings.”

Jamie Bradway, loading a wheeled container to transport tubed drawings to the van.

Bradway: “The Dick Bell experience was a good bonding experience for our two departments [Preservation and Special Collections]; a good opening for new collaboration.”
Hunt Library Planning in Full Swing

By Jeanne Hammer, Capital Management and External Relations

With the selection of the lead design firm of Snøhetta, planning for the James B. Hunt Jr. Library on Centennial Campus has progressed to the programming and predesign phase. This phase is focused on understanding the needs and aspirations for the Hunt Library and will be completed in May 2008. The process is organized around seven two- to three-day interactive workshops with the building committee, user groups, and other members of the campus community. The workshops are being conducted by DEGW, a strategic-design consulting firm that specializes in collaborative work and learning spaces.

In the workshops DEGW engages participants in analytical or vision development activities that allow participants to communicate ideas, share perspectives, and identify commons needs. During this process, focus groups explore topics specific to a user group (e.g., graduate students) or topics that cut across groups, such as information technology. Concurrently, the building committee develops the key project goals, needs, and concepts that align the Hunt Library planning with NC State’s institutional strategic goals and incorporate the needs and aspirations of the library’s user groups.

In addition, during this four-month predesign phase, participants from the Office of the University Architect are collaborating with Snøhetta and other stakeholders in determining the best site for the Hunt Library on the academic oval. Factors such as the scale of the Hunt building, physical properties of the site, and relationship to other...
buildings are considered. North Carolina State University will also complete the design team with the selection of a local architect and engineers for the structural, mechanical, electrical, and plumbing design elements.

With the vision and program shaped, site selected, and design team in place, the Hunt Library project will move into the first stage of design this summer. To follow the Hunt Library progress, go to the Web at http://www.lib.ncsu.edu/huntlibrary/.

Elliot Felix, senior strategic consultant with DEGW, leads the NCSU Libraries’ Directors Council through a workshop session to develop concepts, goals, and themes to explore during the program planning phase for the Hunt Library.

Elliot Felix conducts a focus group of NC State graduate students to explore their specific needs and expectations as an important user group of the Libraries.
Watch PBS Programs on Your Desktop

NC State faculty, staff, and students can now view some of the best and most popular PBS educational and documentary programming online. Nearly 250 PBS programs including the Emmy Award-winning series American Experience and Frontline, as well as ground-breaking documentaries—such as Ken Burns’s The Civil War, Baseball, and Jazz—are now conveniently available as online streaming videos through NC LIVE, North Carolina’s virtual library cooperative.

Viewers can access the collection through the NCSU Libraries’ catalog or through the NC LIVE Web site. Both methods require a high-speed Internet connection and Flash Media Player 9.0 or higher. Remote access to the collection through the catalog requires an NC State Unity ID and password. Any North Carolina resident lacking a Unity ID and password can access the videos through their local public library or any other NC LIVE member library.

NC LIVE is the first virtual library cooperative in the country to offer statewide access to the PBS programs. The state’s leading purveyor of online library content and services, NC LIVE provides all of the University of North Carolina campuses, community colleges, independent colleges and universities, and public libraries with articles and indexing from more than 25,000 newspapers, journals, magazines, and encyclopedias and access to over 25,000 electronic-book and e-audiobook titles. NC LIVE operates from its offices located at the NCSU Libraries and UNC-Chapel Hill Libraries.

Also collaborating on the project is UNC-TV, North Carolina’s statewide public television network, which is contributing resources to make the streaming-video content available to online users. Paid for by grants from the North Carolina State Library in downtown Raleigh, the programs available from the PBS collection also include a variety of videos targeted to children such as selected episodes from the highly acclaimed Cyberchase and Liberty Kids series.

The War intertwines vivid eyewitness accounts of the harrowing realities of life on the front lines with reminiscences of Americans who never left their home towns and tried their best to carry on with the business of daily life while their fathers and brothers and sons were overseas.

Credit: U.S. National Archives and Records Administration.
Focus, a newsletter published three times a year, seeks to promote the services, activities, needs, and interests of the NCSU Libraries to the university, the Friends of the Library, and beyond.

Editor: Terrell Armistead Crow.

NCSU Libraries Homepage: http://www.lib.ncsu.edu/