



Archaeology and Anthropology in a Network-Rich World

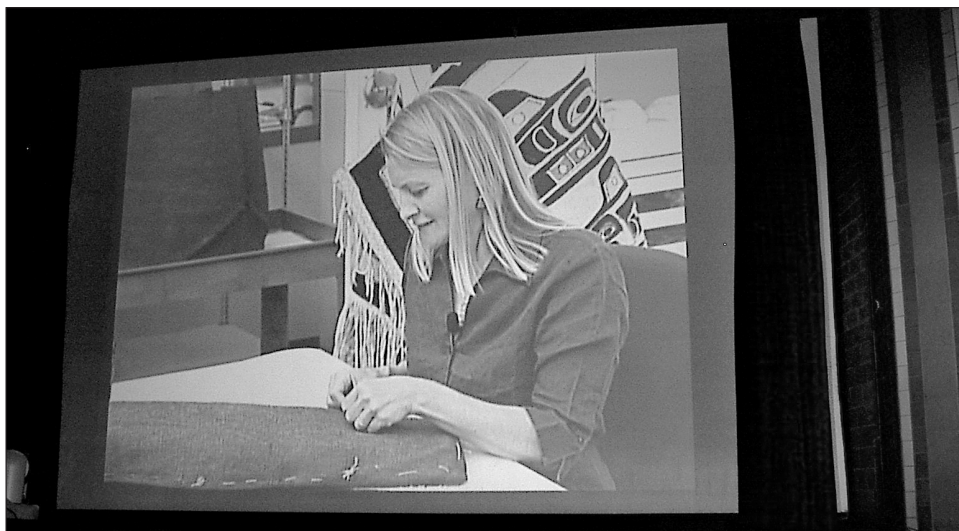
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Internet2, the newest wrinkle in information-transfer technology, is about to permanently alter our research and teaching practices in anthropology and archaeology. Internet2 is a consortium developed by universities, government entities and corporations that provides connections 1,000 times faster than standard broadband. This is no mere difference of scale; the speed boost allowed by the high-speed Abilene network alters how we use the internet by allowing us to connect with collaborators, students and even the public in real time and in an entirely new manner. The connection is so clear that it seems as if the participants are in the same room; in fact, it's so tone-perfect that Miami's New World Symphony is using it to teach music classes to students.

During the Internet2 National Meeting in September, the University of Pennsylvania Museum of Archaeology and Anthropology provided a next-generation internet demonstration of applications titled "Archaeology and Anthropology in a Network-Rich World." Presentations by Penn Museum and department of anthropology faculty demonstrated that collaborative work and multisite teaching is possible, and hinted at the profound changes that would occur in our professional lives in the next few years.

Richard Leventhal, the Williams Director of Penn Museum, argued strongly for a re-evaluation of teaching outreach in his opening remarks; in insisting that museums are not simply collections of artifacts but public sites of education and academic interaction, he emphasized that a museum is also a place of ideas, culture and people. His assertion that the central mission of a museum is the dissemination of ideas to any and all interested persons, including elementary students, members of indigenous cultures and the general public, reminds us that knowledge flows in multiple directions; just as a museum may collect, study and display artifacts, so must the results of that scholarship be made available—and to everyone. In particular, he argued that systems such as Internet2, because they can so capably provide rich and complex real-time information transfer, allow us to support free exchange of ideas between researcher, subject and student.

The museum staged two collaborative examples to demonstrate Internet2's capacity for infor-



Lucy Fowler Williams in conversation with Tlingit artists Teri Rofkar and Shelly Laws in Anchorage over Internet2, examining Chilkat textiles in the University of Pennsylvania Museum's collection. Photo courtesy of Janet Chrzan

mation sharing and teaching. Keeper of the American Collection Lucy Fowler Williams examined woven pieces from the museum's collection with two Tlingit master weavers, and four physical anthropologists in Europe and America discussed the possibilities the Abilene network provides to the study of human evolution.

In the weaving demonstration, Williams manipulated materials precisely as requested by weavers Teri Rofkar and Shelly Laws a continent away; their increasingly detailed instructions allowed a technical analysis of the artifact and provided a running commentary on its construction, symbolic meanings and potential for reproduction of traditional Tlingit weaving techniques.

In the second demonstration, Janet Monge (U Penn), Karen Rosenberg (U Delaware), Milford Wolpoff (U Michigan) and Jakov Radovic (Curator Krapina Collection, Croatian Natural History Museum) simultaneously discussed how Internet2 allows educational access to physical anthropology materials by using a four-way split screen. All four anthropologists agreed that Internet2 allows for the transmission of such large amounts of information that some of the difficulties of physical anthropology research can be surmounted. Hominid fossils are both fragile and precious and thus rarely travel outside of

their country of origin or holding, making study difficult. With Internet2 many kinds of complex physical data can be made available for study and comparison, without damage to the fossils, through transmission of medical 3-D images. Academics have powerful tools for research and teaching when the online scans are combined with accurate fossil models.

Leventhal's call for a re-evaluation of public education began to be realized by these interactions, illustrating the potential revolution in information sharing. Not only can archivists and researchers make museum-held artifacts "virtually" available to indigenous peoples by providing the opportunity for real-time, interactive exami-

nation of items of cultural patrimony but the very location of items becomes less important—if access is made available online. No longer will anthropologists, archeologists and museum workers be limited to hasty "in the field" analysis followed by intermittent access. Furthermore, indigenous populations and even members of the public will be able to view, study and appreciate items frequently unavailable to them because of a lack of museum display space or fragility.

Leventhal enthusiastically explained that with the faster broadband connections he can bring students at Penn to his archeological sites in Central America—virtually, but also accurately and interactively, just as he can bring the indigenous groups and his collaborators in Central America to the table for mutual discussion and scholarship—in the museum. The productive outcome will benefit everyone. ☐

Janet Chrzan is currently completing her doctorate in nutritional anthropology at the University of Pennsylvania. Her research explores the connections between social activities, nutritional intakes, and mother and child health outcomes in pregnant teens. She teaches a variety of courses in the anthropology department and international nutrition in the School of Nursing, and works with the University of Pennsylvania's Health Education eating-disorder and alcohol risk-reduction programs.