# ATC Winter Newsletter

The University of New Mexico

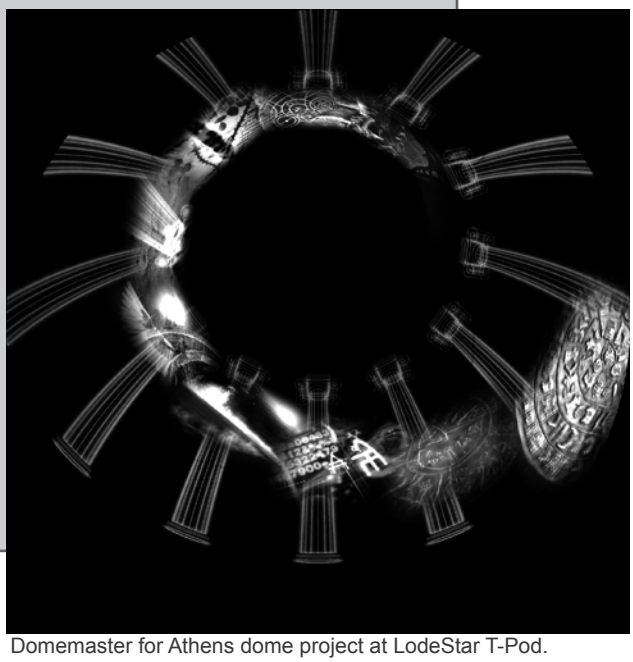
ARTS TECHNOLOGY CENTER
college of fine arts
university of new mexico

## *Letter from the Director:*

This issue of the newsletter will provide an introduction to the Digital Pueblo Project, an ATC endeavor sponsored by National Science Foundation Partnerships for Innovation Program. The Digital Pueblo Project is building an art and technology environment in New Mexico that includes animation and computer graphics in film, television, arts, music and dance. The goal of the project is to create an atmosphere that will foster innovation and economic opportunity in New Mexico and reverse the drain of talented and innovative people.

Key to the project is a network of technology pods (T-pods) that we will create around the state. These pods will be able to communicate with each other through high-speed Internet technologies that will allow us to do distance education and collaborative projects. We have opened the first two pods at the LodeStar Astronomy Center and at the National Hispanic Cultural Center. Future pods will be outside the Albuquerque area. The rest of this newsletter will describe some of the projects and introduce some of the people working on them. - Ed Angel

## ATC Receives Grant for the Digital Pueblo Project



Domemaster for Athens dome project at LodeStar T-Pod.

On October 1, 2002, the Arts Technology Center received a grant from the National Science Foundation's Partnerships for Innovation program to fund the Digital Pueblo Project. As mentioned in the Letter from the Director, the purpose of the Digital Pueblo Project is to create an infrastructure of state-of-the art equipment and facilities as well as education and hands-on training opportunities in digital animation and computer graphics that will attract professional projects to New Mexico.

New Mexico is rich in culture and art and is a leader in science and technology. It has produced well-trained, talented and innovative people in both technology and the arts. Unfortunately, much of this talent has been forced to leave the state due to the lack of job opportunities. In addition, New Mexico's isolation makes it difficult to provide opportunity and access to the information technology world. Educational and economic initiatives are therefore needed to bring together its two great strengths, arts and technology, in an environment that will result in innovation and a sustainable industrial base. With its interdisciplinary mission and existing partnerships with animation-based digital venues like the LodeStar Astronomy Center, this project presented a unique outreach opportunity for ATC.

The key to this project and NSF's Partnerships for Innovation program is the creation of lasting partnerships between the awarded academic institution, governmental departments and programs, nonprofit organizations and private industry. The hope is that these organizations will form partnerships that support innovation in their communities by developing the people, tools and infrastructure needed to connect new scientific discoveries to practical uses. Digital Pueblo Projects partners include:

**Albuquerque Technical Vocational Institute (TVI), Aquila Group, Bandelier EFX, Big Byte, City of Albuquerque, Connect New Mexico, ContiFilms, Drumfire, IBM, Intel Corporation, Ibero American Science and Technology Education Consortium (ISTEC), LodeStar Astronomy Center, National Hispanic Cultural Center, National Indian Telecommunications Institute (NITI), New Mexico Trains, Pixar Animation Studios, Pueblo of Zuni, Sandia National Laboratories, The Studio and Vizeon.**

*Continued on Page 2.*

At the heart of the project is the creation of technology pods (T-Pods) around the state where students of all ages and skill levels can receive training in digital animation, computer graphics and digital filmmaking in a collaborative, project-based environment. Rather than taking a class to learn a software program, students work alongside mentors with experience in digital animation, as well as artists, scientists and film industry professionals, on "real-world" projects. In this apprenticeship-style atmosphere, they acquire the specific skills needed to assist in the project's completion through live instruction, hands-on studio time and interactive collaborations with other T-Pods over the Access Grid and Internet. As students acquire skills working on different projects, they eventually become mentors themselves, training other beginning students in the program and having a more direct hand in the completion of the projects.

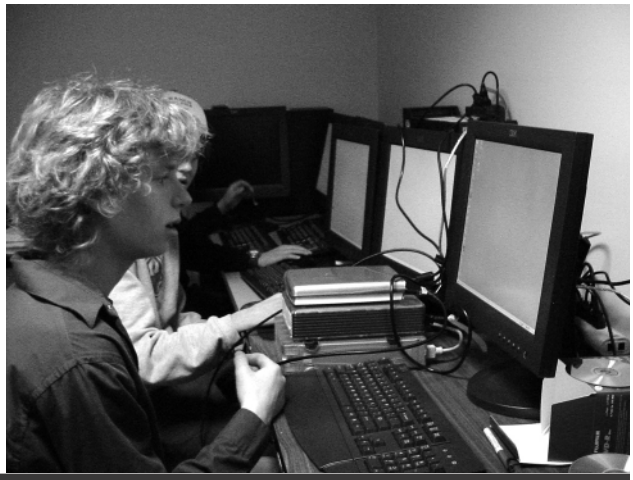
Digital Pueblo projects come from the film industry, ATC artist projects as well as various entities associated with the different T-Pods. They include 2- and 3D digital animations, animations for websites, interactive CD-ROM's and DVD's, and digital video editing projects. The key component for each project is that it is a professional assignment that is intended for real world use.

The initial two T-Pods were set up at the National Hispanic Cultural Center (NHCC) and the LodeStar Astronomy Center. The purpose of setting up the first two pods in Albuquerque was to develop a system for T-Pod design and programs, including equipment set-up and recruitment, before traveling to more remote locations.

Currently, TVI animation instructor Chris Cervantes is leading an animation project at the NHCC T-Pod using the 3-D animation program Lightwave. It involves using Lightwave's Motion Mixer to propel animated bugs in conjunction with a national film project. Class participants included two students from West Mesa High School, two students from TVI and a project mentor. This class will continue through May.

At LodeStar ATC's Multimedia & Curriculum Developer, Hue Walker, has been working with a project mentor, two high school students and one middle school student on an animation project for the new *Eugenides Planetarium* in Athens, Greece. They are producing four one-minute vignettes that will be projected during the 2004 Summer Olympics. Using video sequences provided by Athens, the team is creating four full-dome environments using the animation programs Maya and Adobe After Effects. In a process which combines 2- and 3-D elements into a single project, the team is re-editing the provided footage into multiple loops which are then collaged into the domed space over four different, themed backgrounds created by the team.

Walker's next project for LodeStar will be a three-part project to produce a virtual fly-in and landing on Mars that will eventually become part of a modular Solar System series for live dome shows at LodeStar. The first class starts March 25th and will have students animating the Mars / Deimos / Phobos system with accurate astronomical data. The second Mars class session this summer will animate a surface landing; and the third, session slated for the fall, will work with the Mars Rover data, presenting the information being returned. Michael Crumpler, one of the lead scientists on the Mars mission research and LodeStar staff member, will be assisting the students with the astronomy information needed to complete with the astronomy information needed to complete the project. In addition, Sandia Laboratory engineer Mark Howard will assist them in accurately designing and animating scientific data.



Students at LodeStar T-Pod.

Additional projects for both T-Pods are in the planning stages and will include the completion of ATC Artist-in-Residence GRONK's project for the LodeStar dome, a website animation in Flash as well as additional 2- and 3-D animation projects for local organizations.

"This is a great opportunity for students and teachers alike to work on real world projects, and to work on collaboration skills," commented Walker.

If you would like more information about the Digital Pueblo Project or would like to apply as a student to the project, please visit our website at **http://atc.unm.edu/digitalpueblo.html**.

Newsletter Feature Articles, Design & Layout by Sally Bowler-Hill.


ATC Staff: Ed Angel, Director
Danae Falliers, Associate Director
Sally Bowler-Hill, Program Coordinator
Hue Walker Bumgarner-Kirby, Multimedia Development Specialist

Mailing address:
UNM Arts Technology Center
1923 Las Lomas NE
Albuquerque, NM 87131

Phone: 505-277-2253, Fax: 505-277-2319 E-mail: atcinfo@unm.edu Web site: http://atc.unm.edu