

WINTER 2002 NEWSLETTER

Message from the Director:

This winter brings good news to the ATC. We have been awarded grants from the Rockefeller Foundation and the National Endowment for the Arts. These grants will support a visiting artist program that will start this spring.

This issue of our newsletter features interviews with two great friends of the ATC: David Beining and Tom Caudell. David is the acting director of the Lodestar Planetarium. He has been instrumental in opening the facility to new projects involving our faculty and students that make use of a unique facility. Tom Caudell is Director of the Visualization Laboratory in the Albuquerque High Performance Computing Center. Tom has been a leader in encouraging a wide range of interdisciplinary activities in the lab.

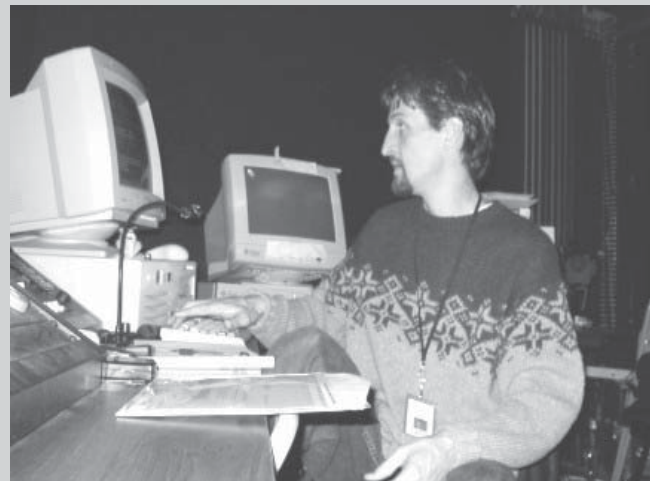
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Lodestar is a joint endeavor between the University of New Mexico and the Museum of New Mexico's Natural History Museum, which provides astronomy education programming to the community in an urban setting. While the Museum provides the space and the infrastructure for Lodestar to present and maintain its programs, UNM provides the content and project development that allows the center to grow. The recently completed center consists of three exhibit halls, a motion simulator, an observatory and the planetarium – often referred to as the dome – located in the Natural History Museum.

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David Beining and Lodestar: Working with ATC Toward Creating Productions for the Dome

David Beining, former Project Director and now Interim Director of the Lodestar Astronomy Center, is very excited about the new directions the Center is taking. With less than five years to call its history, Lodestar has taken on the lofty goal of becoming a full-scale



Beining in the Lodestar control room.

production house of dome format video projects, both for traditional astronomy education and for artistic endeavors in the future.

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Beining & Lodestar Continued.

The dome is currently at the heart of Lodestar's blossoming development. This state of the art facility differs from traditional planetariums in that it utilizes multiple, digital video projectors to create a seamless image that exceeds the viewer's peripheral vision and makes it an immersive environment. The advantage of this type of system is that projects and facilities cost one tenth that of the traditional large format film such as Omnimax. This means more

planetariums are being built, many in smaller cities like Albuquerque. It also potentially provides opportunities to artists and filmmakers for projects that utilize this dome format, who previously did not have the resources to work in large format film.

The latter advantage is at the heart of Beining's vision for Lodestar. Rather than strictly becoming a theater that leases various projects in release, Beining would like to see Lodestar become a production house that produces both educational, astronomy related productions as well as artistic and entertainment related pieces that utilize the dome.

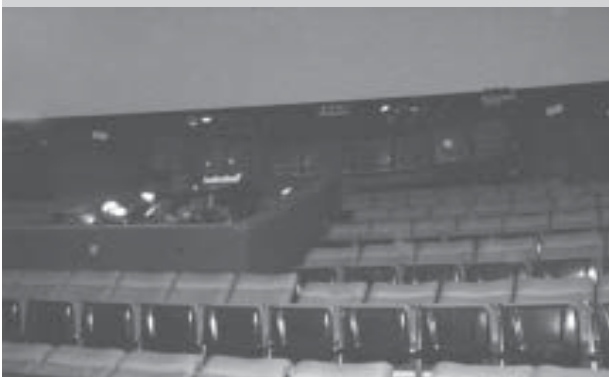
With university astronomy students and faculty, Lodestar can provide the traditional, interactive planetarium environment, where the audience can ask questions of the presenter and receive live feedback. Utilizing this talent in the production of new pieces will also allow Lodestar to raise the production quality of these astronomy shows, which will hopefully raise the overall quality of educational productions in this medium.

Additionally, Beining hopes to present artistic and entertainment pieces designed for the dome in the evenings after normal museum hours. He and the ATC staff would like to see Lodestar become an art venue for digital animation and video projects that will attract the university community as well as young people interested in pursuing a career in digital production.

In fact, Beining's vision for Lodestar is starting to become a reality. UNM animation students have already started work on a piece for the dome using the 3D animation program Maya; and Beining hopes to have a feature length (30 minutes) show for the dome completed by the end of the summer. In addition, ATC is collaborating with Lodestar in the development of proposals to fund artists interested in experimenting in this medium.



Above & below: view of the dome & seating



Stay informed about upcoming ATC events and projects at our website!

www.unm.edu/~atcinfo

In keeping with Beining's efforts to involve the University, ATC has been talking to faculty from the different units within the College of Fine Arts about developing projects for the dome, with a number of these project ideas including students. For example, Bryan Konefsky of the Media Arts department is interested in teaching a class in non-linear narrative for the dome; and the Theater and Dance department has expressed interest in a combined projected and live event there.

Beining hopes these initiatives will allow Lodestar to reach out to the university and the museum to get them involved. "I think ultimately I'm a team builder," says Beining. "I see myself as finding the talent and empowering them to make these films."

If you are interested in developing a project for the dome, please contact your department chair or ATC.

Collaborations Between Art & Science: A Look at Thomas Caudell, Director of AHPCC's Visualization Laboratory

As ATC brings in its first artists in residence to work at the Albuquerque High Performance Computing Center (AHPCC), Thomas Caudell, Director of its Visualization Laboratory and Associate Professor of Electrical and Computer Engineering and Computer Science, is working closely with these artists and ATC staff in the planning and coordination of the digital arts projects that will be created there.



Dr. Thomas Caudell in the Visualization Laboratory

ATC plans to bring in seven individuals or groups of artists to AHPCC throughout the year for residencies ranging in length from ten days to two months. These artists will work on diverse projects in the visualization lab using *Flatland* to create three-dimensional content for virtual spaces. *Flatland* is a software program developed by Caudell and his students to create three-dimensional content for virtual spaces. It allows the user to create virtual environments that utilize images, text, animation, sound and hyperlinks. Unlike closed software applications such as Adobe Photo Shop, *Flatland* is also an open program and is therefore fully customizable and navigable.

Some of these artists will also explore using the Access Grid as a tool for the performance and exhibition of art. The Access Grid is an Internet 2 network consisting of over 70 nodes or access points around the world. Unlike the Internet we use to access the world wide web, where users access networks from various platforms with a wide range of capabilities, each Access Grid node is set up to support multimedia display, presentation and interaction environments as well as interfaces with visualization environments like *Flatland*. This ensures the artist that all viewers will be able to experience the performance or exhibition with the same degree of access and interaction, as well as allow for real-time participation and feedback in a group setting.

While many scientists feel they have little in common with visual and performing artists, Caudell feels not only do they have a lot in common, but there is much each could learn from the other's profession; and he hopes these collaborative residencies will spur further research and collaboration between these two groups.



Continued on page 4.

Director's letter continued

I have also been working with Albuquerque's Flicks on 66 Film Festival, which will take place this summer from July 12-20. This year we plan to have a student animation competition as part of the festival, with the final screening tentatively scheduled for July 13. You can keep track of the festival and the rules for submissions on their website: www.flickson66.com.

Ed Angel, Director
Arts Technology Center

Collaborations continued.

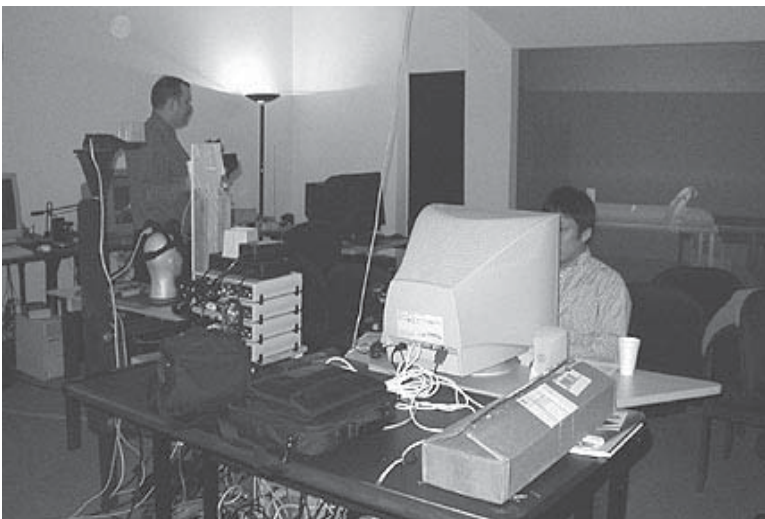
While *Flatland* was created to help scientists interpret the vast amounts of data generated by super computers in a visual media, there has been little research or development on how to visually represent this data within it in a manner that best communicates these trends or patterns. This visualization of the information is what interests Caudell the most.

Caudell is interested in effective ways of communicating data that has no native representational context into visual and auditory models that can not only be clearly understood but also have aesthetic value.

Specifically, he wants to study how artists and scientists can work together to effectively communicate an abstract idea through a visceral medium such as *Flatland*. With their training in subjects such as design, artists bring more effective and impactful ways to communicate abstract ideas with programs such as *Flatland*.

Collaborating on artistic projects in this medium will give computational scientists, such as Caudell, an opportunity to learn more effective ways to comprehend complex data. These collaborations can also provide a framework from which future projects can develop.

Caudell hopes these residencies will not only provide technical assistance to artists using advanced computer systems but also serve to develop other collaborations between artists and computer scientists designed to better represent abstract data.



Students and staff working in the Visualization Lab

Look for up-coming events via ATC's e-mail announcement list!



If you are interested in joining the list,
please contact Sally Bowler-Hill, Program Coordinator at atcinfo@unm.edu.



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