Questacon–CSI:

Collaborative Gaming on a Science Center Web Site

By Geoff Crane

Launched in 2002, Questacon Smart Moves is a national touring outreach program designed to promote cutting-edge science, innovation, and entrepreneurship among high school students. The Smart Moves team of graduate science communicators searches for exciting, relevant, and inspiring examples of Australian and international science and innovation and packs them into the shows they present at local high schools.

Students who see a show are encouraged to participate in competitions and courses run by other organizations. They can also apply to be one of 30 young Australians invited to attend the annual Questacon Smart Moves Invention Convention, a free, weeklong, live-in event in Canberra. There, participants have the chance to meet experienced entrepreneurs and learn about marketing and money skills, intellectual property, commercialization, business, resources, and importing and exporting a final product.

Of course, Smart Moves has its own web site (http://smartmoves.questacon.edu.au) with information about tours, school shows, and the Invention Convention. But to make the site more fun—and to experiment with Flash Communication Server MX, a new software with the capability to connect web site visitors to each other—our Smart Moves team decided to add an interactive feature. The idea was to offer the online audience the same kind of social, collaborative experience that on-site visitors, even those who arrive alone, encounter at the science center or in our outreach programs.

We settled on a multi-player online game, something familiar to most teens. Forensic science was chosen as the subject because that is the topic students most often ask about at our shows. We call our game Questacon: Crime Scene Investigation (QCSI) after the popular television series, but we have tried to make it a little more realistic scientifically than what the students see on TV.

How the game is played

In QCSI, up to four online players become a forensic team investigating a possible homicide at Questacon. The decision to require users to work collaboratively came early in the design process; we saw it as a key element. Players must first choose one of four characters: a detective, lab technician, forensic pathologist, or criminal psychologist. If fewer than four users are present, then one or two of them have to take on an extra role. The game cannot be played by just one person.

Although the software would permit the use of audio or even videoconferencing, we decided to allow only text chat between players. Bandwidth considerations aside, since player interactions are unmoderated, we did not feel comfortable providing multimedia access.

The game begins when the team is called to investigate a dead body on the floor in a Questacon exhibition gallery. Players then explore the
Expert Voices: Blogging as a Partnership Tool

By Eric Marshall

Science centers rely upon partnerships with content experts like scientists and engineers to fulfill their missions. These vital relationships work best when the complementary roles of both experts and science center staff are well understood. In the new Volunteers TryScience (VoITS) initiative — an IMLS-funded partnership between the New York Hall of Science, ASTC, the National Science Digital Library (NSDL), IBM, and IEEE (Institute of Electrical and Electronics Engineers Inc.) — we are working to find or create tools that can facilitate the teaming of science centers and content experts and the mutual sharing of information.

One promising tool we are integrating into VoITS is NSDL's Expert Voices (http://expertvoices.nsdl.org/), a new National Science Foundation–funded blogging project intended to support collaborative conversations among science and technology content experts, education providers, and learners. Blogs for K–12 teachers, librarians, and university faculty are currently being tested, with the official launch of the system scheduled for later this year.

VoITS will work with NSDL and the science center community to create Expert Voices blogs useful to informal education professionals. Ongoing and short-term, event-centered conversations will be led by teams of two to four bloggers, including combinations of content experts, educators, media resource specialists, and other professionals. In this way, specific topics can be addressed from multiple perspectives, and synergies can arise.

Some conversations will focus on science center partnerships with the scientific and engineering communities; others will allow us to play a role in event-driven conversations on topics of interest to the public, such as avian flu or global warming. Through partnerships like this, we expect to engender increased mutual respect and understanding between informal science educators and scientists and engineers.

Social technologies like Expert Voices provide the agora for vital conversations within our busy personal schedules. Because the VoITS blogs and their referenced resources will be indexed as part of NSDL's total online collections (http://nsdl.org), this is also a promising venue for sharing science centers' online resources with a broader public.

Eric Marshall is director of TryScience.org and principal investigator of the VoITS initiative at the New York Hall of Science, Queens. If you are interested in participating in an Expert Voices blog, please contact him at emarshall@nyscience.org, or NSDL director of education and outreach Susan Van Gundy, at vangundy@ucar.edu.

Taking collaboration online

Questacon has had interactive online exhibits since 1995. QCSI — our first multi-user online experience — is an extension of that policy, rather than a new endeavor. Generally, the benefit from providing shared online experiences is to make science center exhibits richer, more like "real life." After all, science is not a solo effort.

The QCSI project took about a year to move from conception to launch, going live at the end of 2004. The budget was $50,000 Australian (US $36,000), plus another $50,000 in staff time. The script was conceived and written in-house, and all but one of the actors were Smart Moves presenters. We had three development partners: MA@D Communication (project management and design), DDBTribal (Flash Communication Server programming), and Freeswimmers (videography). Hosting of Flash Communication Server is outsourced, but all other media are hosted on Questacon's server.

Since its launch, QCSI has been well received by both educationalists and the wider community. The Education Network of Australia (www.edna.edu.au) categorized the game as an online "Working scientifically" resource for secondary schools. USA Today listed it as a "Hot Site" with this review: "Thinking you'll swear off the MMORPGs next year, but still love the social aspects of gaming with others online? Check out this great multiplayer 'investigation' from our friends at Australia's Questacon,... Absorbing CSI-type stuff."

Looking to the future, we have in mind another project with Flash Communication Server MX (now called Flash Media Server), a collaborative nanotechnology game that could tap into at least some of the programming developed for QCSI. A team of online visitors would collaborate to build a "nanobot" for a specific project. Players would each receive part of the specification, plus access to an array of component parts and perhaps a budget or time limit. We are still seeking funding for this project. Any takers?

Geoff Crane is online and digital media manager at Questacon—The National Science and Technology Centre, Canberra, ACT, Australia. Questacon: Crime Scene Investigation can be accessed directly at http://smartmoves. questacon.edu.au/csi/index.htm.
Connecting Learning Communities:  
An Evolving Role for ASTC

By Wendy Pollock

The homepage for ASTC Connect (www.astc.org/astc_connect) features tutorials, workshops, forums, RSS feeds, and more.

In the 1970s, when ASTC got its start, a few dozen staff from member museums gathered twice a year for professional development workshops. Today, the ASTC Annual Conference, first held in 1982, serves many hundreds of attendees each year, and RAPS organized by member institutions reach dozens more.

But with more than 20,000 people in 44 countries now working in ASTC's 553 member institutions, long-distance communication and peer-to-peer learning have become firmly established as dimensions of professional development in the informal science education field. The ISEN-ASTC listserv, launched in 1995 as part of the Teacher Educators Network, carries daily e-mail messages among 1,300+ subscribers on topics ranging from ticketing systems to the teaching of evolution. And the innovations sometimes collectively referred to as Web 2.0 are opening new possibilities for learning communities widely distributed in space and time.

Creating an online forum

As soon as ASTC's first web site opened, in 1996, we began publishing online resources. Inspired by economist Thomas Naylor's observation that "what we need [are] more effective tools to help us make sense of all this information," we joined forces with the Exploratorium and the Brooklyn Children's Museum to experiment with what we hoped would become a shared knowledge base generated during the making of traveling exhibitions. With support from the National Science Foundation's Networking Infrastructure for Education program, we built sites that went beyond the typical online brochure to capture developers' stories and educational resources.

But the technology still wasn't ubiquitous and responsive enough to match prospective users' needs, and our prototype sites remained just that, while we learned how crucial it is to build a system responsive to the community's ways of working and talking.

In 2002, with Internet use common, and a member survey suggesting growing interest in distance learning, we decided to experiment with taking workshop-style professional development online. With help from the Institute of Museum and Library Services, we developed the first prototype of ASTC Connect. Hesitant to adopt one of the classroom-oriented platforms then available, we initially made do with an improvised mix of web forms and e-mail.

Then, in 2005, an NSF-funded collaboration with the Astronomical Society of the Pacific (ASP) enabled us to make the switch to open-source courseware called Moodle. Grounded in social learning theory, Moodle centers on use of discussion forums and live chats and makes content management so easy that volunteer moderators can readily take on management of their own workshops and forums.

ASTC Connect workshops have enabled groups to work together to study visitors' understandings, critique web sites, try out policy debate programs, and write exhibition case studies. A recent discussion centered on "experience libraries" and the "new models" they may suggest for science centers. ASP has already spun off its own Moodle-based community site
WEBIL: A Community Web Site for Interactive Web Design

By Rick Bonney

Web Designs for Interactive Learning (www.wdil.org) is a source of information and a forum for educators who are designing, developing, and evaluating interactive web sites. Sponsored by the Informal Science Education program at the National Science Foundation (NSF), the site had its birth at an invitational conference of the same name—held at the Cornell Lab of Ornithology (CLO) in Ithaca, New York, June 15–18, 2005—and is now maintained by the CLO and the Exploratorium.

The goal of the conference was to identify and publicize “best practices” for designing interactive educational web sites that are instructive but also compelling, engaging, and fun to visit. The 54 attendees included web site producers, designers, developers, and evaluators.

In the course of three days, participants began to codify the criteria for successful interactive web sites, from establishing clear goals, to assessing success from the visitor’s perspective, to evaluating impact. We covered a range of topics, as follows:

- To consider how expert-sanctioned content can interact with and be modified by a community of users, we looked at two citizen science web sites, Great Backyard Bird Count and Nest Box Cams, and reviewed case studies of two ongoing community web sites: Whyville and Backyard Jungle.
- Jimmy Wales, founder of Wikipedia, talked to us about the social and organizational characteristics of an interactive site that contribute to its sense of community and its ability to function effectively.
- We considered the question of niche audiences versus a broad public spectrum through case studies of two web sites: Animal Diversity Web and Ancient Egypt Science & Technology.
- Eric Jolly, president of the Science Museum of Minnesota, spoke to us about the three factors required for success in STEM education: engagement, capacity, and continuity.
- We considered issues related to effective practice in interactive online informal education, including mapping the online world in relation to contemporary learning theories; goal setting and evaluation; multicultural perspectives; social use of the Web; reexamining the language we use and what that language implies; and paradigms for the nature of the experience.

- We considered storytelling and gaming as effective strategies for online learning.
- Finally, we reviewed procedures for evaluating online learning and considered just how much we know about our visitors’ experiences.

Most of the information discussed at the conference is archived at www.wdil.org, along with an evaluation summary, a list of participants, and a sampler of links to high-quality informal education web sites.

All of that is useful, but our goals for the site are much broader. We intend to become a well-visited resource for existing and future developers of interactive web sites and a forum for ongoing discussion of web development issues. To that end, we are currently redesigning the site to make it interactive itself.

Anyone who chooses to participate in the www.wdil.org community will be able to post web sites, images, web code snippets, or even documents to serve as exemplars or to gain feedback from the rest of the community by way of ratings and comments. Community members will also be able to write reviews of other web sites, in which they may offer their opinion concerning why a site, or a section of a site, “works,” or doesn’t work, and how it might be improved. We also plan to offer live chat sessions, hosted by a web site or web site review author, to strengthen community interactions.

The redesigned WDIL site is now undergoing beta testing. Anyone who would like to participate by checking its functionality and adding content is welcome to get in touch for an orientation and the URL.

Rick Bonney (reb5@cornell.edu) is director of program development and evaluation at the Cornell Lab of Ornithology, Ithaca, New York.

called Astronomy from the Ground Up (agfounline.org), and through collaborations with the New York Hall of Science and others, ASTC Connect plans more forums and workshops. By fall we will add the capacity to host live video chats.

Building an exhibits community

Next on the horizon is a new NSF-funded ASTC web site called ExhibitFiles, a mix of exhibit development records and community features that will enable museum practitioners to register and post their profiles, search records in a variety of ways, contribute their own records, and post comments. In collaboration with Iedum and a group of partners with a range of perspectives on exhibit development, we are drawing on information design strategies to help us plan a site (www.exhibitfiles.org) that reflects the ways of working and talking of this extended “community of practice.”

Keeping in mind the advice of social learning researcher Etienne Wenger, theorist of communities of practice, we are striving to “build organizational and technological infrastructures that do not dismiss or impede these processes, but rather recognize, support, and leverage them.” ExhibitFiles will employ features like blogs and RSS feeds to help users participate actively in the site and to enable them to personalize their experiences.

By September of this year, we will open a “pre-site” so prospective users can help to shape its development. Our inspiration comes in part from an observation by Lee S. Shulman, president of the Carnegie Foundation for the Advancement of Teaching, that “learning flourishes when we take what we think we know and offer it as community property among fellow learners so that it can be tested, examined, challenged, and improved.”

In that spirit, we will keep the museum field posted on the process as the exhibits community site develops.

Wendy Pollock is ASTC’s director of research, exhibitions, and publications.
Social Technology Resources

RELATED READINGS


WEB SITES

Learning and Teaching in Cyberspace
http://home.sprynet.com/~gkearsley/cyber.htm
On this web site with a formal education focus, distance learning expert Greg Kearsley, author of Online Education: Learning and Teaching in Cyberspace (see Related Readings, above), provides background research, basics, and dozens of linked examples.

MuseumBlogs.org
www.museumblogs.org
(See page 6.)

Museumatic
www.museumatic.net
The collaborative blog of the Museum Computer Network and AAM's Media & Technology Committee, Museumatic promises "rants and raves on the latest trends in the world of museum informatics and technology."

Museums & the Web
www.archimuse.com
Online content from the annual Museums & the Web conferences dating back to 1997.

steve: The Art Museum Social Tagging Project
www.steve.museum
Steve is a collaborative project by members of the art museum community to explore the potential of shared social tagging (sometimes called "folksonomy") for improving access to collections and encouraging user engagement.

TechSoup
www.techsoup.org
The go-to place for getting started in Web 2.0. Powered by CompuMentor, a nonprofit technology assistance agency, this site provides instructional articles, worksheets, and message-board support, as well as technology-planning information for executives and other decision makers.

Technorati
www.technorati.com
Technorati is a real-time search engine that keeps track of what is going on in the blogosphere—the world of weblogs.

Web Designs for Interactive Learning (WDIL)
www.wdil.org
(See page 14.)
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For updated events listings, click on 'Calendar' at www.astc.org.

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**ASTC Receives Public Service Award**

On April 27, the National Science Board (NSB), the U.S. policymaking and oversight body for the National Science Foundation (NSF), named ASTC as institutional recipient of its 2006 Public Service Award. Initiated in 1996, the annual award recognizes individuals and organizations for their extraordinary contributions to increasing the public understanding of science. To date, 10 individuals and 10 organizations have received the honor.

In its citation, the NSB praised ASTC for its work in supporting new science and technology centers, in helping members to develop innovative ways to increase public understanding of science, and in enabling scientists and engineers to reach the public through traveling exhibitions, educational programs, and youth initiatives. Single out for special mention were ASTC’s 10-year YOUTHALIVE! initiative, supported by the Wallace Foundation, which helped U.S. members to implement programs that “validated and developed the potential of young people, especially in underserved communities,” and IGLO, ASTC’s current multi-partner effort to raise public awareness about the impact of global climate change as part of the International Polar Year (2007–2008) celebration.

The Public Service Awards were presented May 9 by Shirley Malcom, chair of the awards committee and head of the Directorate for Education and Human Resources Programs at AAAS, at the National Museum of Natural History, Washington, D.C. ASTC’s executive director Bonnie VanDorn and former president Walter Witschey (standing in for president Wit Ostrenko, who was attending the ASPAC conference in Perth) both spoke and expressed their appreciation for the honor and their pride in the hard work by ASTC members that inspired it.

Off to the Races

By the time you read this, the preliminary program for this year's ASTC Annual Conference, with details of the many sessions and workshops planned for your professional development, will be in the mail. Our purpose here is to highlight some additional pleasures of ASTC 2006.

Two things come immediately to mind when Louisville, Kentucky, is mentioned: racehorses and baseball bats. For devotees of the former, ASTC 2006 offers two chances to visit famed Churchill Downs: a “Breakfast on the Backside” tour on Friday, October 27, and “Brunch on Millionaires Row,” on Sunday, October 29. The former puts you behind the scenes among the track's jockeys, trainers, grooms, and crews, and the latter, designed with guests and spouses in mind, features a memorable meal at the Skye Terrace and a grandstand seat for the first day of the Fall Meet.

For baseball fans, the perfect day includes a stop at the Louisville Slugger Museum and Factory, home to Major League Baseball's official bat. The museum is a featured stop on a Monday, October 30, Kentucky Heritage Progressive Dinner that includes glassblowing displays at Glassworks, fencing exhibitions at the Frazer International History Museum, and a stop at the Muhammad Ali Center.

Of course, science is the focus of several tours and events. “Fossils and Caves,” on Friday, October 27, spotlights two natural history destinations near Louisville—the vast, exposed Devonian fossil beds across the river at Falls of the Ohio park and Mammoth Cave, a U.S. National Landmark. A second Monday progressive dinner, Stars and Art, features the state-of-the-art Rauch Planetarium, as well as the Speed Art Museum, on the University of Louisville campus. On Tuesday, October 31, a full-day tour starts at Bernheim Arboretum and Research Forest, a 14,000-acre preserve with a cutting-edge “green” visitors center, and ends at Heaven Hill Bourbon Distillery, a heritage center devoted to Kentucky's favorite spirit.

All tours and events this year will be managed by Louisville's Convention Connection (www.convention-connection.com). Look for their order form in the preliminary program and submit your request directly to them.

Please note that many sessions and workshops at ASTC 2006 require pre-registration; for best choice, get your name in as soon as possible. Early-bird registration closes on August 11. Details at www.astc.org/conference.
WET, WOODED, AND WILD—Meld the immersive qualities of a zoo and the inquiry-based approach of a science center, and you get Explore the Wild, the outdoor science park that opened May 13 at the Museum of Life and Science (MLS), Durham, North Carolina. The six-acre woodland habitat and wetland site, housed in a former granite quarry, features live animals, interactive exhibits, and state-of-the-art technology that allows visitors to walk in the steps of a wildlife biologist.

A visit begins on the 750-foot Woodland Boardwalk, which follows a winding path into the basin. Along the way, infrared camera stations help visitors detect changes in temperature associated with microclimates in the surrounding landscape. Each microclimate determines the life forms that can survive in that area of the wetland.

Reaching the end of the boardwalk, visitors encounter the museum’s three interactive animal habitats: Black Bear Yard, Red Wolf Habitat, and Lemur Habitat. Zoom cameras, controllable by visitors, allow up-close views of the animals—even the bashful wolves, which tend to stay hidden in their den. Multimedia kiosks in the habitats feature interviews with biologists, answers to frequently asked questions, and animal-sound games geared to younger visitors.

From the animal exhibits, it’s a short walk to the Wetlands Overlook and Lab, located near the quarry’s rock walls. Activities here focus on wetland habitats, as well as the history of the mining activity that created the quarry. Visitors can pump samples of water to identify microscopic life, build and experiment with a stream table to learn about runoff, or learn more about how wetland animals, such as ducks and tadpoles, get around.

Explore the Wild is the first stage of a three-part, $13 million outdoor exhibition master plan that also includes Catch the Wind (opening in September) and Dinosaur Trail (opening date to be announced). Major funding for the project has been provided by the County of Durham, the National Science Foundation, and the NC GlaxoSmithKline Foundation.

Details: Allison Savicz, director of marketing, allison.savicz@ncmls.org

MISSING LINK—In the April 6 issue of the journal Nature, Ted Daeschler, curator of vertebrate biology at the Academy of Natural Sciences, Philadelphia, Pennsylvania, announced the discovery of a 375-million-year-old fossil with features that place it squarely at the evolutionary transition from fish to limbed animals. The new species, Tiktaalik roseae, has a skull, neck, ribs, and part of a fin like the earliest limbed animals, but also fins and scales like a fish, demonstrating that the evolution from life in water to life on land happened gradually among shallow-water fish.

Ted Daeschler displays a fossil and sculpture of Tiktaalik roseae. Photo courtesy the Academy of Natural Sciences

The find was made on Ellesmere Island, Canada, in the Nunavut Territory above the Arctic Circle. From 2000 to 2004, Daeschler and Neil Shubin of the University of Chicago co-led four expeditions to explore the island’s Fram Formation, a stream-system deposit laid down in the Palaeozoic, when North America was part of a supercontinent straddling the equator. Fragments uncovered in the first year convinced the team to return each summer; in 2004, they discovered multiple Tiktaalik specimens. ("Tiktaalik" is the local Inuitikuluk word for "large, shallow-water fish.")

Native to what was then a subtropical climate, Tiktaalik was a predator with sharp teeth, a crocodile-like head, and a flattened body 4 to 9 feet long. The skeletal structure of the fossils and the nature of the deposits surrounding them suggest that the animal may have lived out of the water for short periods. "This kind of shallow stream system seems to be the place where many features of land-living animals first arose," says Daeschler.

The Academy worked quickly to bring information about the discovery to its museum audience. A week after the announcement, the actual fossils (later replaced by casts) went on display, along with a fossil preparator’s sculpted model of the living fish and a video of Daeschler describing the discovery. The scientist also addressed a free public forum at the Academy on May 3.

Details: Carolyn Belardo, communications manager, belardo@acnatsci.org

DO I KNOW YOU?—The unique characteristics that identify us as individuals are the subject of Biometrics: The Body As Identity, a temporary exhibition that opened November 29 at la Cité des Sciences et de l’Industrie, Paris, France. The trilingual (French/English/Spanish) exhibition invites visitors to test machines that scan fingerprints, facial structure, or even the iris to identify a person. As visitors explore the rapidly growing field of biometric technology and its applications in daily life, they are also encouraged to think about the practical, legal, and ethical questions posed by these tools.

The 500-square-metre (5,381-square-foot) exhibition is presented in three parts:

• In the Foundation of Biometrics, visitors learn how the historic study of human body measurements (anthropometry)—from da Vinci’s theory of the “divine proportion” to Francis Galton’s 1892 inspiration that fingerprints
Visitors register their identities as they enter Biometrics: The Body as Identity. Photo courtesy la Cité des Sciences et de l’Industrie could be used for formal identification—has merged with modern technology to create biometrics.

Biometric Techniques presents the different tools used to identify an individual. Here, visitors may register their fingerprints, faces, irises, and signatures (under pseudonyms of their choice) to test computer recognition systems. Activities include Access Refused? (visitors test the limits of the system by varying lighting and the recognition threshold) and Stronger than the Machine? (visitors compete against the computer to identify an individual based on photos taken years apart).

The Application of Biometrics in France and Around the World demonstrates practical uses for this technology while encouraging discussion and debate about the possible effects of biometrics on daily life. Visitors can watch interviews of four experts discussing the advantages of these new technologies (convenience, heightened security), as well as the risks (loss of privacy). Visitors also are invited to debate individual liberty issues in a role-play game held once each day.

Biometrics: The Body As Identity will remain open in la Cité’s Innovations Gallery through November 5, 2006. The exhibition was developed in partnership with SAFRAN group, Sagem Morpho, and the National Commission on Informatics and Liberty.

Details: www.cite-sciences.fr/biometric (web site published in French and English)

RENAISSANCE REANIMATED—Imagine piloting a 500-year-old flying machine or launching the first-ever paddleboat. That’s the visitor experience in Leonardo da Vinci: Man, Inventor, Genius, a temporary exhibition at the Museum of Science and Industry, Chicago. The exhibition sets over 50 of the Renaissance artist’s original designs in motion through interactive models, displays, and computer animation.

At the heart of the 20,000-square-foot exhibition is a software program developed by an Italian firm, Leonardo3, that brings the Codex Atlanticus, the most innovative of da Vinci’s notebooks, to life. More than 100 pages of the 1506 manuscript, never before displayed outside Milan, have been scanned into the program. At 60-inch, flat-panel touchscreen stations, visitors can browse through its pages, zooming in and changing the angle of the animated, 3-D sketches. (The software can also be purchased for home use.) Nearby hands-on exhibits encourage visitors to experiment as da Vinci did, flinging “cannonballs” from catapults, flapping their “wings,” and building bridges.

Also included in the exhibition are more than 60 wooden models custom-built by Italian craftsmen from da Vinci’s original drawings. Some are interactive, including a gearshift that guests can operate with a handle.

• a short film, developed with the History Channel, that details Leonardo da Vinci’s life.

• a section addressing rumors and mysteries about da Vinci, including fact and fiction in the recent novel and film The Da Vinci Code.

• an introduction to “Modern-Day Leonards”—40 scientists, inventors, entrepreneurs, and artists on the forefront of innovation.

Leonardo da Vinci: Man, Inventor, Genius will remain on display at the museum through September 4. The exhibition was developed in partnership with the History Channel, Mitsui/Olympus, and Leonardo3. Major sponsors include GE, NBC5, Boeing, LaSalle Bank, Motorola, and the Motorola Foundation.

Details: Anne Rashford, director of temporary exhibits and events, anne.rashford@msichicago.org

Chabot Space & Science Center, Oakland, California, received a $75,000 grant from the Koret Foundation Funds. The award will support the Galaxy Explorer program, a development and education program that puts 14- to 18-year-old youths to work as floor staff and outreach officers.

The Virginia Museum of Natural History Foundation, Martinsville, has received a grant of $350,000 from the Virginia Tobacco Indemnification and Community Revitalization Commission. The grant will fund state-of-the-art permanent exhibitions in the foundation’s new museum facility, scheduled to open in September 2006.

Five ASTC members were among the 40 museums awarded 2006 Conservation Project Support grants in April by the (U.S.) Institute of Museum and Library Services. Receiving IMLS funds were the Peabody Museum of Natural History, Yale University, New Haven, Connecticut; the Newark Museum Association, Newark, New Jersey; the Cincinnati Museum Center, Cincinnati, Ohio; the Boonshoft Museum of Discovery, Dayton, Ohio; and the Milwaukee Public Museum, Milwaukee, Wisconsin. The total amount awarded to all institutions comes to $2.7 million, and recipients will match the grants with an additional $4.6 million.
Kathryn D. Sullivan, former president and present science advisor of COSI Columbus, has been elected vice chair of the (U.S.) National Science Board (NSB). Board members are appointed by the President of the United States and confirmed by the Senate; NSB officers, who serve two-year terms, are elected by the board from its current membership. (For more on the role of the NSB, see “ASTC Notes,” page 16.) Sullivan is a former astronaut, a veteran of three NASA space shuttle missions.

Ed Able, president and CEO of the American Association of Museums, has announced his retirement from that position, effective August 1. Able headed AAM for 20 years, most recently shepherding the organization through its centennial observation in Boston last May. The search committee for his successor is chaired by Jeffrey Rudolph, president and CEO of the California Science Center and former chair of the AAM board.

Jennifer J. Collins is the new senior vice president of development at the New York Hall of Science, Queens. Most recently a consultant for cultural institutions in New York City, Collins was formerly director of development and marketing at the Brooklyn Children's Museum.

Kelly Finnerty has been appointed director of education and exhibits at the Bakken Museum, Minneapolis, Minnesota. Previously senior director of education at the Minnesota Children's Museum, Finnerty succeeds Beth Murphy, who continues at the Bakken as director of special projects.

Lee Kimche McGrath,* ASTC and Institute of Museum Services (first executive director of ASTC, first director of Institute for Museum Services, 1995 ASTC Fellow)

Kathy McLean, Independent Exhibitions and the Exploratorium

Frank Oppenheimer,* The Exploratorium (ASTC founder, 1991 ASTC Fellow)

Bonnie Pitman, Dallas Museum of Art and Bay Area Discovery Museum

Jeri “Geraldine” Robinson, Boston Children's Museum

Roy Shafer,* COSI Columbus (former ASTC president, 1997 ASTC Fellow)

Harold Skramstad Jr., Henry Ford Museum and Greenfield Village

Michael Spock, Boston Children's Museum and Field Museum of Natural History

Kenneth Starr, Milwaukee Public Museum (1992 AAM Distinguished Service Award winner)

George Tressel, National Science Foundation (1984 ASTC Fellow)

* = deceased