United States Pavilion

Final Report

Lisbon, Portugal 1998
Message from the President of the United States of America

Welcome to the United States Pavilion...

in the World Exposition. We are pleased to participate with so many other nations in the last world exposition of the twentieth century—"The Oceans: A Heritage for the Future." We are especially grateful to the people of Portugal for hosting this exposition. Lisbon is a fitting venue to this Expo on the 500th anniversary of Vasco da Gama's historic voyage. The oceans are a vital resource for America from commerce, to scientific exploration, to the extraordinary richness of marine life so crucial to biodiversity. The oceans are valued and respected by the people of the United States. Today more than half of all Americans live and work within fifty miles of the coastline. One out of 6 jobs is marine-related and one-third of our entire gross domestic product is derived from coastal fishing, transportation, recreation and other industries dependent on healthy waters and marine life. Inside the U.S. pavilion you will see many exhibits sponsored by Americas' leading ocean related agencies and educational organizations. Thanks to government and private contributions, we are able to share with you, our visitors, some of the best our country has to offer. I hope you will take from your visit today a greater understanding and appreciation for the ocean environment that surrounds the U.S. and extends to all the world.
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Message from the Commissioner General

As Commissioner General, and an American deeply proud of my Portuguese heritage, it is my distinct pleasure to welcome you to the United States Exhibition at the 1998 Lisbon World Expo. It is both a privilege and an honor to welcome the international community to our Pavilion, and to offer our respect and appreciation to the people of Portugal for their graciousness in hosting this event.

From Monterey to Miami, America is home to some of the most beautiful and popular beaches in the world. The oceans are also a vital source of energy, food and other natural resources. Last year alone, U.S. consumers ate an average of 15 pounds of seafood per person - much of it provided by Portuguese Americans in New England, California and Hawaii. Moreover, U.S. scientists depend on the oceans for marine organisms to help develop lifesaving medicine, and the oceans also serve as America's global highway, with 98 percent of all U.S. foreign trade passing through our nation’s ports.

In short, the oceans play an increasingly important role in the lives of all Americans and all citizens of the world. The oceans truly are “A Heritage for the Future.”

The U.S. Pavilion has been designed to celebrate America’s commitment to exploring, understanding, and preserving the oceans. As you make your way through the four main Pavilion areas - the Hall of Discovery, Ocean Awareness, Oceans Theatre and finally the Ocean Environment - you will experience the interactive educational exhibits that showcase some of the best and brightest of America’s research and technology leaders.

We are extremely fortunate to have the U.S. Navy and the U.S. National Institute of Environmental Health Sciences as major exhibitors in the pavilion, joined by leading ocean-related agencies and educational organizations. We are equally grateful to our many private sponsors, whose generous support made our participation possible. It is this American public-private partnership that has made the exciting, interactive pavilion you are about to experience a reality.

So, then, on behalf of everyone associated with the U.S. Pavilion here at Expo '98, and especially on behalf of the two-and-a-half million Luso-Americans, welcome, and enjoy your visit.
Message from the United States Ambassador to Portugal

Between May 21 and September 30, 1998, Portugal hosted the last World Exposition of the 20th century, EXPO '98 in Lisbon, dedicated to the theme: "The Oceans - A Heritage for the Future." With one of the most-visited and widely-acclaimed of over 160 national pavilions, the United States has taken full advantage of this unique opportunity to reach out to millions of visitors, including foreign leaders and dignitaries, as well as business representatives and tourists from around the world.

The U.S. Pavilion has been a source of great pride for our country, a fact to which all of the visiting Americans -- including several U.S. Congressional delegations, Cabinet Officials, academic experts, and business leaders can personally attest. Consistent with the EXPO theme, the U.S. Pavilion celebrates our national commitment to exploring, understanding and preserving the oceans. Visitors to the pavilion have seen and experienced carefully designed exhibits sponsored by U.S. Government agencies and leading educational organizations that work with the oceans.

Our participation in EXPO '98 has also cemented our healthy and mutually-beneficial relationship with Portugal. For both Portugal and the United States, our visible presence in Lisbon represents an important commitment to one of our most important transatlantic partnerships. The U.S. Pavilion also features exhibits from three of our coastal states with significant Portuguese-American populations: Massachusetts, California, and Hawaii. The "Wave" sculpture memorial honoring Luso-Americans symbolizes that the ties between the United States and Portugal are centuries-old, predating even U.S. independence.

While simultaneously bringing international recognition to Portugal as a prospering and innovative nation, EXPO '98 has also enabled the United States to showcase its global leadership on ocean-related issues. We can look forward to realizing the benefits of this invaluable international public outreach and a closer relationship with Portugal well into the new millennium.

Gerald S. McGowan
Welcome to the U.S. Pavilion

"Our goal is to showcase the best in American technology and to celebrate the oceans while emphasizing their importance to humankind."

U.S. Commissioner General, Tony Coelho, December 2, 1997

Providing exciting displays of new concepts and cutting-edge technologies is characteristic of all World's Fairs. The 1998 World Exposition, held in Lisbon, Portugal, was no different. Under the theme, "The Oceans: A Heritage for the Future," the United States joined 160 countries in Lisbon from May 22 to September 30, 1998, to celebrate during the International Year of the Ocean.

Almost 100 years ago, President William McKinley justified U.S. participation in expositions by saying:

Expositions are the timekeepers of progress. They record the world's advancement. They stimulate the energy, enterprise, and intellect of the people and quicken human genius. They go into the home. They broaden and brighten the daily life of the people. They open mighty storehouses of information to the student. Every exposition, great or small, has helped this onward step.

McKinley's statement creates a perfect framework for describing the impact of U.S. involvement in World Expo '98. Under the leadership of U.S. Pavilion Commissioner General Tony Coelho, the U.S. Pavilion was a "timekeeper of progress." The U.S. Pavilion opened its doors to visitors for over 4 months (May 22, 1998, through September 30, 1998). During that time period, the U.S. Pavilion displayed cutting-edge internet-based educational programs, hands-on exhibits, never-seen before footage of the ocean floor, and innovative scientific research projects produced by leading government agencies, ocean-related non-profit organizations and educational institutions.

The U.S. Pavilion's film, "Discover Planet Ocean," produced exclusively for the U.S. Pavilion by the Woods Hole Oceanographic Institution, recorded the world's advancement." Narrated by Jean-Michel Cousteau with music by Enya, the film awed visitors with never-before-seen footage of deep-sea hydrothermal vent communities with their underwater volcanoes, and dramatic images of the H.M.S. Titanic wreck.

With its nationally recognized website, the U.S. Pavilion did quite literally "go into the home". Over 950,000 people visited the U.S. Pavilion website from all over the world, with an average stay of 5 minutes each hit.

Special U.S. Pavilion events "broadened" and "brightened" the daily lives of the people. On June 14, 1998, U.S. National Day, the U.S. Pavilion entertained thousands of visitors all day long with its over 365 performers including the Ambassador of Music, B.B. King. Mr. King's National Day performance drew a record-setting crowd of over 25,000 people to Sony Plaza, the World Expo's largest entertainment venue.
Sponsoring several special education events, the U.S. Pavilion created numerous venues to open the “mighty storehouses of information to the student.” Host to several education-oriented activities and exhibits, the U.S. Pavilion experience enabled visitors and participants to share in the excitement of oceanographic research and education.

Working Together to Represent the U.S. at Expo '98

Consistent with the oceans theme, the U.S. Pavilion was a tribute to American ingenuity in the areas of underwater research and technology. It was a reality thanks to the incredible support and sponsorship of the U.S. Navy, the National Institute of Environmental Health Sciences, Coca-Cola, Metcalf & Eddy, the National Oceanographic and Atmospheric Administration, the U.S. Departments of Energy, Commerce, and Transportation, the National Geographic Society, the Keiko Free Willy Foundation and numerous other organizations and corporations. Sponsorship from coastal states with significant Portuguese-American populations—California, Hawaii and Massachusetts—also made the U.S. Pavilion a success. The nature of sponsorship reflects a journey, guided by a national commitment to the oceans.

Paving the Way: U.S. Participation in Expo '98

The journey to Lisbon started on April 4, 1996, when President Clinton announced U.S. participation in Expo '98. Building enthusiasm on his May 24, 1996, trip to Portugal, Vice President Gore, stated, "The United States will be proud to participate in the Lisbon World Exposition of 1998 with the theme of the oceans as the heritage of mankind. As the nation that pioneered the sea routes that today link mankind across the globe, I am grateful that Portugal has chosen to issue a clarion call for greater attention to the oceans and the preservation of maritime resources."

On June 3, 1996, United States Information Agency (U.S.I.A.) Director Joseph Duffey appointed Tony Coelho, former U.S. Congressman, as Ambassador and U.S. Commissioner General. Coelho was honored to accept his new responsibility for the design, fabrication, and operation of the U.S. Exhibition.

U.S. Commissioner General Coelho presenting U.S. Pavilion Plans to Potential Sponsors

A Strategy for Success

Assuming his role as U.S. Commissioner General, Tony Coelho developed a strategy to raise support and identify content and themes for the Pavilion. Targeting the Federal, state and local levels of government and private sector interests, U.S. Pavilion organizers developed mechanisms to generate interest in the project. Logically, it made sense to approach companies, government agencies and other organizations with interest in the oceans. Also, working with U.S. companies either already in Portugal or looking to penetrate the market presented itself as a sound strategy for sponsorship. Direct mailings and phone calls were made to leaders in ocean science and technology industries. Lists of companies with interests in Portuguese markets were generated and company leaders were contacted. Federal agencies whose missions involved the oceans were approached.

Coelho recognized early on that the key to success was the involvement of all sectors. As part of his strategy, Coelho was committed to securing public, non-profit and private sector involvement in the U.S. Pavilion. A united approach ensured broad U.S. representation in ocean research, business and technology.

On October 2, 1996, the Theresa and H. John Heinz III Charitable Fund and Joseph E. Seagram & Sons, Inc., joined the project as its first sponsors. The Coca-Cola Company, a supporter of previous World's
Fairs, joined the U.S. Pavilion project as a sponsor in November of 1996.

Note: For a Complete listing of U.S. Pavilion private sector sponsors see page 52.

In the process of securing support, the U.S. Pavilion organizers adhered to Commissioner General Coelho’s directive to have a thematic Pavilion that was fluid and represented the U.S. at its best. Meeting this challenge involved more than simply raising funds. All along, U.S. Pavilion staff stayed abreast of new ocean-related scientific discoveries and events as well as relied on the experience of those in the field to guide them.

**Tapping the Expertise of the Nation**

In October of 1996, Coelho formed an impressive *Ad Hoc* Scientific Advisory Board (see page 53) made-up of leaders in government, industry and non-profit organizations. The body provided U.S. Pavilion organizers with guidance and access to cutting-edge information, ensuring an exciting and content-rich start to the development of the U.S. Pavilion experience.

The creation of the Scientific Advisory Board had an unexpected, highly beneficial result; namely, the formation of lasting partnerships among principle players in the planning and coordination of the U.S.‘s overall participation in the International Year of the Oceans activities. U.S. participation in the Expo ‘98 became and integral part of the U.S.‘s YOTO activities, and created yet another important forum to generate ideas for the 1998 celebration.

In September of 1997, an *Ad Hoc* Education Advisory Committee was formed to serve much the same purpose as the Scientific Board but with a focus on education. The committee was charged with conceptualizing, developing and identifying exemplary programs for the educational components of the U.S. Pavilion. The committee also worked on strategies to bring the U.S. Pavilion experience back to schools in the U.S. The body was made up of science education content experts, scientists, and educational technology experts who contributed significantly to the development of the U.S. Pavilion’s Education Program, including ideas for the nationally recognized website (see page 54 for Education Advisory Committee members).

**Leading Federal Involvement**

In early 1997, Commissioner General Coelho and his Deputy Commissioner General met with Admiral James Watkins to discuss plans for the U.S. Pavilion at Expo ‘98. Admiral Watkins, former Secretary of the Navy and currently leader of the Consortium of Oceanographic Research and Education (CORE), discussed the potential involvement of the U.S. Navy and the National Institute of Environmental Health Sciences in the U.S. Pavilion. Admiral Watkins provided the Commissioner General with key contacts within each agency.

Commissioner General Coelho and his staff explored ways for NIEHS and Navy to participate in and enhance U.S. Pavilion exhibits. NIEHS operates three marine science centers in the U.S. whose missions are to study and report on the links between the health of the oceans and human health. In discussions with the Director of one of the three centers, the University of Miami’s Marine Freshwater Biomedical Sciences Center, it was learned that part of NIEHS’s mission is to educate the public about the links between ocean and human health.

The Director of the University of Miami’s Marine Center was excited about the prospects of participating in Expo ‘98, but did not have sufficient funds to do so. Commissioner General Coelho and his staff contacted members and staff of the congressional appropriations committees with jurisdiction over NIEHS, and were pleased to find that there was interest in providing federal funding for an NIEHS exhibit at the U.S. Pavilion. As a result, $4 was secured for the NIEHS exhibit and education program associated with Expo ‘98 (see pages 29-31 for a detailed description of the Education Program).

At the same time, the U.S. Pavilion’s Deputy Commissioner General approached Admiral Paul Gaffney, Chief of the Office of Naval Research, about the possibility of the U.S. Navy serving as a major sponsor. Admiral Gaffney was very interested in the idea given the Navy’s position as the world leader in oceanographic charting and protection. As was the case with NIEHS, the Navy could not fund its proposed
participation. Admiral Gaffney agreed to support federal funding for the project if U.S. Pavilion staff initiated the request to Congress. Rear Admiral Paul Tobin, Jr., Oceanographer of the U.S. Navy, was also very enthusiastic about the Navy's participation in Expo '98.

At the September 1997 meeting of the Ocean Principals Group—an assemblage of high-ranking U.S. officials convened to develop the U.S.'s strategy for participation in the International Year of the Ocean activities—Rear Admiral Tobin discussed the importance of U.S. Naval participation in Expo '98. Tobin had just visited the Expo '98 site, and was very enthusiastic about the Navy's participation.

As suggested, U.S. Pavilion staff initiated a request to Congress and, as a result, $2.5 million was secured for the U.S. Navy exhibits at Expo '98. As the opening of Expo '98 drew nearer, more and more agencies and companies joined the U.S. Pavilion.

The Commissioner General's Club

The Commissioner General's Club was created specifically to raise funds from U.S. Corporations conducting business in Portugal. Membership, at $2,500 a company, offered access to the U.S. Pavilion's V.I.P. lounge, V.I.P. tours, protocol assistance in gaining access to other Pavilions, Expo '98 passes, invitations to receptions hosted by the U.S. Commissioner General, and recognition in the U.S. Pavilion and in select U.S. Pavilion documents. Commissioner General's Club sponsors totaled 46 companies (for a complete listing, see page 52).

The U.S. Pavilion's State Program

Creating an opportunity for involvement, the U.S. Pavilion's State Program invited states with significant Portuguese-American populations to use exhibit space at the Pavilion. Depending on the level of participation, states had temporary, promotional and educational exhibits, ranging from 2 to 4 weeks long. Three states with large Portuguese-American populations signed-up: California; Massachusetts; and Hawaii.

The U.S. Pavilion was a success, due in large part, to the dedication and commitment of its sponsors. For complete listing of sponsors, please see page 52.
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<th>Sponsor</th>
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<th>Percentage</th>
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<td>Department of Commerce</td>
<td>$75,000</td>
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<tr>
<td>National Institute of Environmental Health Sciences</td>
<td>$4,025,000</td>
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<tr>
<td>Department of Energy</td>
<td>$70,000</td>
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<tr>
<td>Department of Defense</td>
<td>$2,525,000</td>
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<td>Department of Transportation</td>
<td>$30,000</td>
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<tr>
<td>State Exhibitors</td>
<td>$150,000</td>
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<tr>
<td>All Other Sources (Private and Not-for-Profit)</td>
<td>$2,812,000</td>
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<td><strong>$5,567,000</strong></td>
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**U.S. Pavilion Funding**

- Department of Commerce: 1%
- National Institute of Environmental Health Sciences: 41%
- Department of Defense: 26%
- Department of Energy: 1%
- Private and Not-for-Profit: 29%
- State Exhibitors: 2%

Total Budget: $9.7M
The U.S. Pavilion Experience

Located in the South International area of the Expo Park, the U.S. Pavilion was one of the most popular Pavilions, hosting an average of 10,000 visitors a day. In all, over 1 million people visited the U.S. Pavilion.

Welcome/Queuing Area

Visitors started their tour by viewing a welcome video produced by the National Geographic Society. The video, on several monitors in English, Portuguese, and Spanish, included official greetings from U.S. President William J. Clinton, U.S. Commissioner General Tony Coelho, and U.S. Official Spokesperson Dr. Sylvia Earle. Visitors were also introduced to the U.S. Pavilion's official mascot, Sake the Sea Lion, from Moss Landing Laboratories in California.

Inside the Pavilion, visitors experienced four major areas:

1. The education-oriented Hall of Discovery;
2. The Ocean Awareness room, featuring exhibits from major oceanographic institutions and states;
3. The Oceans Theater playing the exclusively produced film, Discover Ocean Planet; and
4. The exhibit-packed Ocean Environment.

The Hall of Discovery

The Hall of Discovery was designed to promote U.S. ocean science education programs. At the first point of entry, visitors walked into a majestic hall, featuring nine unique exhibits with interactive elements and videos. Under the theme of student/scientist partnerships, visitors experienced recently developed programs that use the Internet to bring the research lab to the classroom and teach students how to conduct scientific research.

Ocean Awareness Room

After leaving the Hall of Discovery, visitors entered the "Ocean Awareness" room. Displaying America's leadership in ocean issues, exhibits highlighted America's two leading oceanographic institutions, Woods Hole Oceanographic Institution and Scripps Institute of Oceanography. The Ocean Awareness Room was also host to the U.S. Pavilion's State Program participants. Three U.S. Coastal states with significant Portuguese American populations – Massachusetts, California, and Hawaii – presented their exhibits on a rotating basis. This room also included permanent displays from the National Geographic Society and the U.S. Department of Energy.

Oceans Theatre

After viewing the film, visitors entered the "Ocean Environment", the main exhibit area and the climax of the Pavilion. Combining in-depth examinations, hands-on interactions and information-rich displays, the environment simulated an underwater experience. The main attractions were the simulated iceberg and the Aplysia touch tank. The perimeter walls of the gallery featured coral reef replicas and scrims filled with moving marine graphics, creating a subtle illusion of being immersed in the deep blue sea.
The two major exhibitors in the “Ocean Environment” were the United States Navy and the U.S. National Institute of Environmental Health Sciences (NIEHS).

**Gift Shop**

The U.S.A. Shop, the next stop after the Ocean Environment, sold a range of products from U.S.A. shop T-shirts to Cowboy Hats. Specially designed logo items included caps, water bottles, T-shirts, sun-visors, tote bags, and “fanny packs”. The official U.S. pins were always in demand. Other popular products included baseball caps with the Chicago Bulls’ logo as well as other sports team logos and the trademark Harley Davidson logo hats.

**U.S. Pavilion employees model products from the USA Shop**

Native American products such as “dream catchers” were also popular in the USA Gift Shop. Reinforcing the messages learned in Ocean Environment, the NIEHS marketed Aplysia beanbag toys in an effort to raise marine mammal awareness. Proceeds from the sale of the “Please Ya’s” support graduate students at the Rosenstiel School at the University of Miami.

**Aplysia Toys and T-shirts from the USA Shop**

In the USA Shop area, United Parcel Service, Citibank, Penguins and Newport Harbor also had displays and product information as official sponsors of the U.S. Pavilion.

**Restaurant**

As a participant at Expo '98, the United States was fortunate enough to secure restaurant space on one of the popular four floating barge restaurants. **Ocean Blues Bar and Grill**, the U.S. Pavilion’s independently run restaurant, was located in a beautiful setting on the Tagus River in the South International Area – just a few steps away from the U.S. Pavilion.

**Ocean Blues Bar Area**

Featuring regional dishes from Alabama, New York, Denver, Louisiana, Tennessee, Miami Beach, Phoenix, Washington, and Santa Barbara, Ocean Blues gave visitors from around the world a flavor for U.S. cuisine. The fun did not stop there, however. Live bands and entertainment, appropriately blues and jazz bands, played on into the night, entertaining Expo visitors.
The US Pavilion Tour.
The next pages will provide you with a tour of the U.S. Pavilion, highlighting the exhibits, sponsors and themes represented at the Pavilion.

- Hall of Discovery
- Ocean Awareness
- Oceans Theatre
- Ocean Environment
- Retail Store
- Ocean Blues
- Visitation Statistics
...The first step in our voyage spotlights ten organizations that are pioneering new ways to explore the ocean - and sharing what they learn. From satellites to submersibles, from laboratories to the internet, researchers and educators across the United States continue the age-old quest to understand our planet. These exhibits exemplify ways we can utilize technologies for learning - and excite students about the wonders of the ocean ...
The Next Wave, a Center for Marine Science and Technology at the University, is conducting cutting-edge research for future marine scientists. UMass - Dartmouth is located near New Bedford, Massachusetts, one of the largest Portuguese American communities in the United States.

**Major Sponsors:** UMASS, New Bedford Whaling Museum, Hydro Active

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WhaleNet • whale.wheelock.edu • Boston, MA

Michael Williamson founded WhaleNet in 1993 to excite students about math, science, the environment and technology. His extensive involvement in marine science and education helped inspire this project.

Williamson is an Associate Professor of Science at Wheelock College in Boston, Massachusetts, where he has taught marine biology, oceanography, physical science, ecology, and mathematics courses since 1988.

**Exhibit Text:** WhaleNet is used by people who study the marine environment and by non-scientists who want to experience the excitement of exploration, combining dynamic teams of scientists with the latest technology. WhaleNet provides a global source of unique data and information, and provides exciting interaction between students, teachers, and researchers.

**Major Sponsors:** Wheelock College, National Science Foundation

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Acoustic whale sound dome

**Description:** Interactive exhibit with directional audio whale noises
As a maritime nation, the United States has the basic and enduring national interests in the oceans, and is committed to protecting the ability to move freely through and above them... Knowledge of the oceans allows the US Navy to maximize its operational capabilities. The Navy continually collects, interprets and uses real-time ocean data in direct support of Naval operations.

More information: See Ocean Environment Room NAVY exhibits

The JASON Foundation for Education is a 501(c)(3) non-profit educational organization headquartered in Waltham, Massachusetts. It was founded to administer the JASON Project, an educational project begun in 1989 by Dr. Robert D. Ballard following his discovery of the wreck of the RMS Titanic. After receiving thousands of letters from children who were excited by his discovery, Dr. Ballard and a team of associates dedicated themselves to developing ways that would enable teachers and students all over the world to take part in global explorations using advanced interactive telecommunications.

Major Sponsors: EDS, National Geographic Society, Bechtel, Sprint, Sun, ICI and NSF
Voyage of the Spray

Voyage of the Spray, Inc. is a not-for-profit adventure-based educational distance learning project designed to let teachers experience first-hand the concepts, ideas, and theories they teach. The goal of the venture is to empower teachers through adventure experiences, thereby enhancing their ability to motivate, inspire, and educate. Voyage of the Spray, Inc. will recreate Joshua Slocum’s epic round-the-world sailing voyage. International teams of teachers will serve as crew members aboard Crystal Spray, a large replica of Slocum’s Spray and the centerpiece of the project. Crystal Spray is currently being rebuilt at Winter Island in Salem Massachusetts to prepare this vessel for this historic undertaking. A land-based rebuild project is underway to prepare the vessel for this historic undertaking. The voyage, which will take three years, will follow the same route that Joshua Slocum took on his expedition. Crystal Spray is scheduled to depart from Boston on 24 April 1999. Thirty-two ports of call will be made, with approximately two weeks sailing time between ports. The ship will arrive back in Newport, Rhode Island.

Location: Bay 1.1
Format: Hard Card
Size: 40.022kb
Length: 1:58.25 min

Description: Interactive Exhibit with video history of the Crystal Spray

Major Sponsors: University of Alabama, Boise State University
Global Learning and Observations to Benefit the Environment (GLOBE) is a worldwide network of students, teachers, and scientists working together to study and understand the global environment. Students and teachers from over 5600 schools in more than 70 countries are working with research scientists to learn more about our planet.

GLOBE students make environmental observations at or near their schools and report their data through the Internet. Scientists use GLOBE data in their research and provide feedback to the students to enrich their science education. Global images based on GLOBE student data are displayed on the World Wide Web, enabling students and other visitors to visualize the student environmental observations.

Special Events:
September 1-3, 1998
U.S. and Portuguese GLOBE students demonstrated the GLOBE Program both inside and outside the US Pavilion with Internet demonstration and water sampling.

Major Sponsors: NSF, NOAA, NASA

Pride of Baltimore - www.intandem.com/NewPrideSite • Baltimore, MD

Pride of Baltimore was commissioned in 1988 to serve as the Goodwill Ambassador for the state of Maryland and the Port of Baltimore. It was built in 1848 at the New London Borough Alien 6th Street. The ship is called Baltimore Clipper.

Exhibit Text: Pride is an innovative nearly-real-time learning adventure that involves students in a trans-oceanic, intercultural experience combining a traditional sailing ship with advanced technology, the experience blends old and new into a powerful tool for Global learning.

Location: Bay 1.2
Format: Hard Card
Size: 28.878kb
Length: 1:26:06.00 min

Participating Countries: Argentina El Salvador Kazakhstan Poland Australia Estonia Kenya Portugal Austria Federation States of Micronesia Kyrgyzstan Romania Belgium Fiji Korea South Russia Benin Finland Luxembourg Senegal Bolivia Timbuktu Madagascar South Africa Bulgaria Germany Mali Spain Canada Ghana Marshall Islands Chad Greece Mexico Sweden Chile Guatemala Moldova Switzerland China Guinea Mongolia Tanzania Costa Rica Honduras Morocco Trinidad and Tobago Croatia Israel Namibia Tunisia Czech Republic Ireland Netherlands Turkey Denmark Israel Norway USA Dominican Republic Italy Pakistan United Kingdom Ecuador Japan Palau Uruguay Egypt Jordan Peru

Description: Video documentary of GLOBE project

Major Sponsors: Maryland State Department of Education
Virtual Canyon • www.virtual-canyon.org • Monterey Peninsula, California

Just imagine students, from their desktops anywhere, exploring and researching deep sea habitats in the Monterey Canyon via datalinks from the Remotely Operated Vehicle (ROV) and working collaboratively with scientists and other students to research and create electronic field trips of their own. Just imagine students producing research, poetry, art, and dance inspired by and reflecting their explorations of this new "ROV world."

The Virtual Canyon Project is a "work in progress" as participating agencies, students, and teachers develop a prototype for student online science exploration, research, and publishing - targeted at grades 3 and 9. The focus is the deep sea habitats in the Monterey Bay Canyon using the rich bioresources of the Monterey Bay and its science research community; the project serves as a model of collaboration between K-12 education, an aquarium, and the science research community.

Major Sponsors: National Science Foundation
More Information: See Education Program

Free Willy Keiko Foundation • www.Keiko.org • Newport, OR

The Free Willy Keiko Foundation is a private, non-profit organization founded in 1995. Its mission is to rescue, rehabilitate and attempt to return captive and stranded cetaceans (whales and dolphins) to their native habitats, through the operation of a state-of-the-art, deep-water rehabilitation facility. In conjunction with its rehabilitation efforts, the Free Willy Keiko Foundation will facilitate on-site scientific research aimed at learning more about the species of the facility's occupant.

Description: Video loop of Keiko mission
Contact: (541) 867-3540

Major Sponsors: Mattel Toys, United Parcel Service, Humane Society of the United States
...After Leaving the Hall of Discovery, visitors enter the Ocean Awareness Room. Designed to showcase America's leadership in ocean issues, this exhibit area highlights two leading oceanographic institutions, Woods Hole Oceanographic Institution and Scripps Institute of Oceanography, along with special state exhibits and exhibits from the National Geographic Society and the U.S. Department of Energy...
Department of Energy
www.doe.gov • Washington, DC

The Department of Energy is a leading science and technology agency whose research supports our nation's energy security, national security, environmental quality, and contributes to a better quality of life for all Americans.

Exhibit Description: The U.S. has teamed together with Europe to launch a space project and weather surveillance program that will discover ways to better predict weather patterns.

Scripps Institution of Oceanography
www.sio.ucsd.edu • University of California, San Diego

For more than ninety years, scientists at Scripps have conducted a continuous search on the seas and in the laboratory for knowledge about the marine environment. The scientific scope of the institution has grown to include physical, chemical, geological, and geophysical studies of the oceans as well as biological research. More than 300 research programs are under way today in a wide range of scientific areas, including studies of global warming and long-term climate change, the marine food chain, earthquake prediction, pharmaceuticals from sea life, and coastal ocean processes.

The institution has a staff of about 1,200. Scripps Institution of Oceanography offers graduate instruction leading to Ph.D's in oceanography, marine biology, and earth sciences.

Description: Free standing floor exhibit with video loop
The Woods Hole Oceanographic Institution is a private, independent, not-for-profit corporation dedicated to research and higher education at the frontiers of ocean science. Its primary mission is to develop and effectively communicate a fundamental understanding of the processes and characteristics governing how the oceans function and how they interact with the Earth as a whole.

To fulfill this mission, WHOI must successfully recruit, retain, and support the highest quality staff and students and provide an organization which nurtures creativity and innovation. It must stress a flexible, multidisciplinary, and collaborative approach to the research and education activities of its staff within an equitable working environment as well as promote the development and use of advanced instrumentation and systems (including ships, vehicles and platforms) to make the required observations at sea and in the laboratory.

WHOI makes the results of its research known to the public and policymakers and fosters its applications to new technology and products in ways consistent with the wise use of the oceans. WHOI secures the essential resources to sustain these activities, a responsibility which the Trustees and Corporation Members must jointly share with management and staff. It is the goal of the Institution to be a world leader in advancing and communicating a basic understanding of the oceans and their decisive role in addressing global questions.

After 108 years the National Geographic Society today is propelled by new concerns: the alarming lack of geographic knowledge among our nation's young people and the pressing need to protect the planet's natural resources. As our mission grows in urgency and scope, the Society continues to develop new and exciting vehicles for broadening our reach and enhancing our legendary ability to bring the world to our millions of members.

"The National Geographic Society' has been organized 'to increase and diffuse geographic knowledge,' and the publication of a Magazine has been determined upon as one means of accomplishing these purposes. As it is not intended to be simply the organ of the Society, its pages will be open to all persons interested in geography, in the hope that it may become a channel of intercommunication, stimulate geographic investigation and prove an acceptable medium for the publication of results."
California 

California has taken steps in its ocean management focus on stewardship, economic sustainability, education resources and technology, and governance. California has a Luso-American population of over 300,000, the largest of any state in the U.S.

Exhibit Description: Free standing exhibit with video monitors

Hawaii

Visitors can chart Hawaii’s unique maritime history by contrasting early Polynesian navigation with modern maritime seafaring methods. Hawaii has long been a destination for Luso-Americans, making it fifth in population with nearly 60,000

Exhibit Description: Floor map and multimedia display with pamphlets.

Massachusetts

The “Bay State” is viewed as ‘up and coming’ in the commercial, cultural, and tourism industry. Almost 300,000 Luso-Americans have settled in Massachusetts, making it second in population in the U.S.

Exhibit Description: Video monitors and pamphlets on state tourism
A blue planet turns slowly against the background of eternity, we have always lived at the edges of the sea. We are comforted by its rhythms and awed by its power and beauty. Below the tumultuous wave we find a magnificent world containing a diversity of flora and fauna of exquisite grace, color and form. Those who venture in encounter an explosion of life unlike anywhere on land form. We are becoming familiar with this world beneath the waves and with creatures that call it home. And while we marvel at life in the shallow seas and traverse across the mighty oceans, we can not help but imagine what lies deeper below. The sea has always been one of Humankind's greatest challenges. From the dawn of time we venture forth fearlessly into the unknown. Today we are witness to a new age of exploration. One in which technology takes us farther then we've ever gone before. Inside the submarine Alvin we leave the world of sun behind and enter a place of perpetual cold and eternal darkness. The journey takes us to the farthest stretches of our imagination to the world less familiar then the surface of the moon As the Alvin spirals slowly downward it is enveloped by an unexplored ocean realm shrouded in myth and mystery. We descend into a region of near weightlessness, where being invisible means survival. Yet our eyes behold luminous lifeforms in a wondrous symphony of color. Deeper still at the ocean floor, the frontier once thought to be closed for an eternity now unfolds before our eyes. No shipwreck is beyond our reach. Here lies Titanic, a modern day legend. She was thought to be unsinkable. In the darkest places in the ocean, we discover one of the most extraordinary ecosystems of the planet: the magical world of hydrothermal vents. Fueled by volcanic activity, these underseas geysers create a ribbon of life that winds around the Earth. In the most extreme environment of our planet. Water temperatures up to 400 degrees centigrade. Poisonous fluids that will kill life above. Here, in a place without the sun's energy, where we were sure no life could flourish we find a density and diversity of life forms, that in places seems to rival the tropical rainforests. Remarkably, these newly discovered communities are dependent on chemical energy created deep within planet Earth. It is one of the most significant discoveries of humankind. The discovery of these deep-sea communities has revolutionized the way we think of life on our planet. So far we have spent little time exploring here. Many questions remain unanswered but the thirst for discovery is as old as humanity itself. By looking deep within our planet, we are beginning to better understand the story of life on Earth and the possibility of life on other planets.

Executive Producer: Mark Johnson
© 1998 Woods Hole Oceanographic Insititution
...the major exhibit area designed to simulate underwater experience, and the exhibits themselves combine in-depth examination, hands-on interaction, and information rich displays...
United States Navy

- Importance of preserving freedoms of navigation
- Tactical use of ocean information
- Navy's commitment to preserving the ocean environment

Navy Exhibits in Ocean Environment

- A Solid Waste Solution
- Recycled Plastic
- North Atlantic Circulation
- Freedoms and Responsibilities at Sea
- The U.S. Coast Guard
- Man's Deepest Dive
- Deep Sea Diving
- Titanic
- Titanic: Lost and Found
- The Law of the Sea
- Digital Nautical Charts
- SONAR Mapping
- Collecting Ocean Data
- El Niño
- Ocean Data
- Acoustic Monitoring
- Bilge Water Treatment

Exhibit space simulates an underwater experience including both video and multimedia exhibits.

A Solid Waste Solution
Exhibit text: "Working to protect the ocean environment, the U.S. Navy has developed technology that eliminates all floating debris from its ships. Solid waste such as paper, cardboard, and food waste are finely ground, mixed with water, and reduced to a biodegradable slurry that quickly breaks down into the sea. Treated waste is discharged overboard with no danger to the environment."

SONAR Mapping
Exhibit Text: "For centuries, the only way to chart the ocean floor was to lower weights on measured lines to the bottom. The invention of SONAR allowed ships for the first time to analyze depths and contours and create a continuous portrait of the ocean floor."

United States Coast Guard

Ships, boats, aircraft, and shore stations -- all are part of the U.S. Coast Guard. Coast Guard operations and personnel span many diverse areas. Its four main missions are Law Enforcement, Maritime Safety, Marine Environmental Protection, and National Security.
1 - NIEHS
Meet the NIEHS (National Institute of Environmental Health Sciences)

The National Institute of Environmental Health Sciences (NIEHS) is one of 24 components of the National Institutes of Health — which is a part of the United States Department of Health and Human Services. The Director of NIEHS is Dr. Kenneth Olden.

The NIEHS Mission

"Who will stay healthy and who will not? What causes human disease dysfunction?" Three factors — environmental influences, individual sensitivity, and age — interact to determine wellness and illness. By understanding each of these three factors and how they affect each other, the National Institute of Environmental Health Sciences (NIEHS) strives to reduce human illness.

The NIEHS carries out its mission through multidisciplinary biomedical research as well as prevention and intervention. Its communications efforts embrace training, education, technology transfer, and community outreach programs.

Quotes:

"New concepts and approaches provide environmental health answers. These include molecular genetics, macromolecular modeling, and physics and engineering sciences."

"Lab training for high school students is a highlight of NIEHS education programs."

Major Sponsor:
National Institute of Environmental Health Sciences
University of Miami
University of California
University of Wisconsin
University of Washington

2 - Microscopes (NIEHS)
Keeping an Eye on the Ocean

In the United States and elsewhere, scientists enlist commercial and sports fishermen as part of a global surveillance team monitoring the world's oceans. Using hand-held microscopes, these fishermen help to identify harmful micro-organisms — including the toxic organisms that you can see pictured in front of you.

Find the Villains!

Look through the microscope. How many of the naturally occurring toxic (poisonous) marine organisms pictured above can you identify? Though these creatures are tiny, the damage they can cause is great. Every year, these organisms are responsible for Harmful Algal Blooms (HAB) worldwide.

Quotes:

"A toxic red tide contains harmful micro-organisms."

3 - Ion Channels Puzzle Model
Ion Channel Model

Ions (electrically charged atoms or groups of atoms) cross cell membranes through water-filled pathways called ion channels. The video illustrates how these channels open and close to send electrical impulses to nerves, and how toxins modify their activity.

Over the past decade, researchers struggling to understand the complex mechanisms that govern nerve activity and functions have constructed models of these electrically-based "gateways." Explore the ion channel model to discover how toxins (poisons) affect normal nerve function.

4 - Aplysia and Man
The Nerve of the Aplysia

This model looks "inside" the nerves of the Aplysia, a creature whose simple brain is suited to nerve studies.

"Siphon Withdrawal" - Touching its rhinophore (A) or parapodium (B) triggers nerves (green lights). These relay the sensation to central nerve cells (yellow), which send the message to motor nerves (red) that tell the siphon to withdraw.

Feeding - Sensory nerves (green lights) around the mouth (C) signal the "brain" (yellow) that there is food. This activates motor neurons (red) in the animal's large foot, moving it to its meal.

1. Siphon (for breathing)
2. Tail
3. Parapodium (for swimming)
4. Rhinophore (for small, taste)
5. Eye
6. Mouth
7. Foot (for gliding like a snail)
The Iceberg
NIEHS presentation illustrating the interaction between pollution and the environment. Created on the spot by a 21 ton compressor using condensation from the surrounding air.

Aplysia Touch Tank
(See NIEHS section)
Sea snails used in neurological research

Deep Rover (NAVY)
Underwater deep sea submersible developed in part by Sylvia Earle, conducts research over 1km under the ocean collecting plant samples highly sensitive with robotic arms.

Buoy
A combination of new and old technology used to predict climate and weather change (NAVY)

Community Partnerships
The successful effort to clean up the Boston Harbor in Massachusetts (Metcalf & Eddy)
Popular American fare, provided to a country a world away, Ocean Blues and the USA Shop sell items representative of a variety of states and interests. Ocean Blues takes the image of a classic mix of Louisiana 'Cajun' and other American standards. The USA Shop sells items meant as keepsakes and educational as well...
<table>
<thead>
<tr>
<th>Month</th>
<th>US Pavilion</th>
<th>Expo</th>
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Visitors to US Pavilion By Month

Visitors to Expo By Month

Day of Month

May June July August Sept

Day of Month

May June July August Sept

The data shows a steady increase in visitors to both the US Pavilion and the Expo throughout the months of May to September.
Education Program

The U.S. Pavilion environment encouraged visitors to learn more about the oceans in innovative and informative ways. Under the leadership of U.S. Commissioner General, Tony Coelho, the U.S. Pavilion stimulated thinking about the relationship between humans and the marine environment. Host to several special education and cultural events, the Pavilion provided an ideal venue for students of all ages, from around the world, to discover the oceans.

Concerned about the visitors and students who could not share in the excitement of Expo '98 first-hand, U.S. Commissioner General Tony Coelho developed an Internet strategy to provide access to the U.S. Pavilion experience before, during and after Expo. The website remains active after Expo '98, serving as a resource for those interested in the U.S. Pavilion and marine science education.

U.S. Pavilion organizers consulted with science and technology education experts as well as marine scientists to develop sound exhibit strategies and themes (see pages 53 and 54 for advisory committee lists).

Demonstrating American excellence in education, the U.S. Pavilion’s Education Program involved three major components:

- A nationally recognized website, featuring U.S. Pavilion news, marine science education quests led by the U.S. Pavilion’s animated multi-environment robot ranger, daily ocean-related news stories from ENN (the Environmental News Network), and scheduled live chats with Pavilion guides. The U.S. Pavilion’s website served as a mechanism to bring the Expo '98 experience back to schools in the U.S., and continues to provide information about the U.S. Pavilion after Expo '98.

- On-site interactive exhibits in the Pavilion’s Hall of Discovery and the Ocean Environment displayed exemplary U.S. ocean science-related education and research programs. Special emphasis was placed on programs using networking technologies to create successful student/scientist partnerships.

- On-site programs and events allowed U.S. and Portuguese students with mutual interests in marine science to meet and exchange ideas. The U.S. Pavilion hosted several student groups, including students from the Virtual Canyon Project in Monterey Bay, California, and the U.S. and Portuguese GLOBE Programs. The U.S. Pavilion also provided special tours to scientists and educators visiting Expo '98 throughout the summer.

Exhibiting exemplary ocean science education-related materials, the U.S. Pavilion excited and informed visitors from all over the world about the endless opportunity technology and education can provide for students of all ages.

The U.S. Pavilion Website:
http://www.usexpo98.org


Ultrabot, the U.S. Pavilion’s self-propelled ranger robot, guides visitors through several ocean-related resources available on the web. Developed in consultation with technical and content experts, Ultrabot takes visitors on
If you can't physically make it to the USA pavilion at the Lisbon World Exposition, don't fret. Here's a QuickTime glimpse. Or check out a way-cool Ultrabot for an oceanic excursion. Along with an interactive floor plan and RealVideo ceremonies."


three information-packed quests. The adventures are targeted to middle schools students and organized around the following three quest themes:

> Quest 1 – Whales and Weather
> Quest 2 – Marine Navigation & Ocean Pollution
> Quest 3 – Whales and Pollution

Students travelling through the Internet on Ultrabot adventures use specially designed E-logs to record their "observations" -- just like a research scientist. The whole idea behind Ultrabot was to create a web-based ocean science research experience that teaches users about the oceans and, at the same time, teaches them the process of scientific inquiry.

After successfully completing each adventure, participants can print out a special commemorative certificate making them part of Ultrabot's Ultra Corps.

"We are using Ultrabot as a way to excite children about the oceans and, at the same time, shine light on the many marine resources on the Internet," said U.S. Commissioner General Tony Coelho in his June 4, 1998, statement announcing Ultrabot.

Education Programs and Activities

Education events in the Hall of Discovery were used to reinforce the themes and messages of the Pavilion. Visitors at these events were able to meet with the students and teachers that are changing the face of science education. Providing opportunities to take a closer look at U.S. Programs first-hand and establishing contacts with key participants allowed visitors to do exactly what these programs teach -- learning by doing.

Education Event Highlights


The U.S. Pavilion brought the ocean to stage live via satellite on June 14, 1998, during the U.S. National Day "Year of the Ocean" Scientific Symposium. Joining satellite and advanced underwater communication technologies to create a memorable educational experience, U.S. Pavilion organizers "wowed" visitors at Expo '98 when they featured Jean-Michel Cousteau on-screen live underwater from the Monterey Bay Maritime Sanctuary in California. During the event, students from the American International School of Lisbon and teachers from the U.S. Navy's Ocean Voyagers Program met on-stage and discussed the oceans with Cousteau.

(See also National Day)

U.S. Pavilion News... Cousteau em directo do fundo Pacifico Un simpósio sobre preservação dos oceanos deu a possibilidade de uma ligação à equipa de pesquisa oceanográfica de Jean-Michel Diário de Notícias 15-06-1998
July 2, 1998, Ocean Science Bowl Winners

Teams of science students from around the U.S.A. competed in the first National Ocean Sciences Bowl for an all-expense paid trip to Expo '98. Commissioner General Coelho at the U.S. Pavilion's restaurant, Ocean Blues, hosted the 5 winners from Lexington, Massachusetts, for lunch.

The National Ocean Science Bowl, sponsored in part by Pavilion sponsor, the U.S. Navy, is designed to broaden awareness of ocean research among high school students, educators, parents, and the public. The U.S. Pavilion proudly recognized excellence in ocean science education, and gladly hosted the National Ocean Science Bowl winners.

As part of its educational outreach strategy, the U.S. Pavilion provided V.I.P. tours for Portuguese students visiting Expo '98.

Luís Madeira, a biology teacher from the Escola Secundária da Amadora, expressed his gratitude for a tour by saying,

"On behalf of the group of students of the Escola Secundária da Amadora that were so warmly welcomed on the special visit to the US Pavilion on July 10th, we want to express our gratitude. We have great memories of the reception we were honoured with and we do hope that in the near future we will have the pleasure of your visit to our school."

July 13-17, 1998, Student from California's Virtual Canyon Program Demonstrate Project in Pavilion's Hall of Discovery

For four days, six high school students and their teachers from Monterey, California, impressed U.S. Pavilion visitors with demonstrations of the interactive CD-Rom and Internet-based Virtual Canyon Program funded primarily by the National Science Foundation. Designed as a classroom tool, the program allowed visitors to conduct research on Monterey's 4000-meter deep sea canyon.

The highlight of the trip occurred when the Monterey students took over 50 teenagers from the Santa Maria do Olivar School of Tomar, Portugal, on an electronic field trip at the U.S. Pavilion using the Virtual Canyon exhibit.

Theo Friederich, Monterey High School Junior, said the following about the experience,

"This project is the first site like this that's ever been done. It's great to be able to bring it to Portugal. Other countries can see our technology and maybe we can work together and make it even better.

After she worked on the computer, Portuguese student Sofia Barbara exclaimed,

"I like it. It's a different experience because we could see what they are doing in other schools. I especially liked the way we found micro-organisms on the bottom of the sea.

Gary Martindale, Watsonville High School physical science, earth science and chemistry teacher said,

"It's been an amazing experience for me. As a teacher, I've learned a great deal about deep sea technology and how students learn."
The trip received local and national media coverage in the United States and Portugal. TeleExpo, Expo '98's official media operation, generously agreed to film the experience making it possible to feature the student exchange on Monterey, California’s CBS affiliate KION, Channel 46. Plans are to make the local CBS documentary national.

The event was made possible with sponsorship from the Luso-American Foundation, AT&T, Pacific Bell, California State University Monterey Bay, Monterey Bay Aquarium, Monterey Bay Aquarium Research Institute, Wooden Ship Productions, Monterey Bay Business Council, Apple Europe and Silicon Graphic, Inc.


In an exciting educational and cultural exchange that will not be forgotten by its participants, the U.S. Pavilion served as a forum for an international youth exchange the week of September 1-3, 1998. Over 50 GLOBE Program students and their teachers from six Portuguese and three U.S. GLOBE schools met at the U.S. Pavilion for the first time to demonstrate to visitors how they monitor the health of the environment following a set scientific protocol.

The students working outside and inside the Pavilion approached visitors with incredible enthusiasm and interest, bringing the queuing line and Hall of Discovery to life with their energy.

Notably, students impressed U.S. Official Spokesperson, Dr. Sylvia Earle and Commissioner General Tony Coelho, by demonstrating hydrology protocols with water samples from the Tagus River.

Established in over 5,500 schools worldwide, the U.S.-based GLOBE Program represents an innovative approach to science education. It focuses on creating young scientists whose work can be used by research scientists. Using the Internet and following a set scientific protocol, students, teachers, and scientists monitor environmental change together. Major funding for the GLOBE program comes from U.S. Federal Government agencies, including many of the official U.S. Pavilion government sponsors.

U.S. Pavilion News...

Pequenos cientistas ajudam a promover ambiente Alunos americanos e portugueses do Programa Globe ensinam os visitantes do Pavilhão dos EUA a conhecer a natureza.

Diário de Noticias 02-09-1998
Opening Day Ceremonies May 22, 1998

On May 22, 1998, the U.S.A. exhibition at Expo '98 officially opened. U.S. Commissioner General Coelho cut the entrance ribbon at a ceremony with distinguished guests Commerce Secretary William Daley, U.S. Ambassador to Portugal Gerald McGowan, and Dr. James Baker, Administrator of the National Oceanic and Atmospheric Administration.

In his opening statement, Commissioner General Tony Coelho remarked,

"After months of planning, we are proud to open our doors to visitors at the U.S. Pavilion. It is not only a world-class display of state-of-the-art ocean research and technology, it is a total interactive experience that will keep visitors enthralled from beginning to end. From our exhibits on El Nino and icebergs, to our exciting new movie and live sea creatures in our touch tank, the Pavilion is designed to be a hands-on, fun, learning experience for everyone." 

Southern California's Trojan Marching Band greeted and honored guests with 'Stars & Stripes' and then led them through the Expo streets to the Opening Day Reception held aboard the USS Caron. The Band's impressive Opening Day performance appeared on several local Portuguese television stations, providing the Lisbon population with a taste of Americana.
U.S. President Clinton Speaks to Lisbon Expo '98 Live Via Satellite – June 12, 1998

By far the most impressive after hours event hosted by the U.S. Pavilion was when President Clinton spoke to the international community attending Expo '98 live, via satellite. Part of a series of U.S. National Day events, the live feed featured Clinton's landmark "Year of the Ocean" policy address at the National Ocean Conference in Monterey, California.

The international press corps jammed the multipurpose Oceans Theater inside the U.S. Pavilion to watch President Clinton and Vice President Gore speak via satellite on U.S. ocean policy. Both the President and Vice President – and several of the other speakers including First Lady Hillary Clinton and U.S. Pavilion Spokesperson Dr. Sylvia Earle – addressed the Expo audience directly during their remarks. Shown widely around the Expo site, the U.S. Pavilion provided visitors with a chance to witness major U.S. Policy announcements right as they were made.

"This week's National Ocean Conference is the centerpiece of the United States' celebration of the Year of the Ocean. Highlights of the conference will be presented to an international audience on U.S. Day at the World's Fair in Lisbon, Portugal." Herald EUA, 07-06-1998
U.S. Pavilion at a glance

**National Day**

- Ice cream social at Commissioner General's residence
- J.M. Cousteau tribute
National Day Ceremonies –
June 14th, 1998

According to Expo '98 authorities, the U.S. Pavilion's National Day concert performance by B.B. King and his band drew an estimated 25,000, by far the largest crowd to pack Sony Plaza, the biggest entertainment venue at World Expo '98 in Lisbon, Portugal. The 72-year-old music legend belted the blues and strummed his famous Gibson guitar for more than two hours.

The concert capped the U.S. National Day festivities at Expo '98, the last world's fair of the 20th century. As America's "Ambassador of Music," Mr. King waived his normal appearance fees and agreed to donate his performance to Expo '98 on behalf of his country.

Before B.B. hit the stage, the Ministers of Music from Washington, D.C. warmed up the crowd. They, too, donated their appearance. Sara Tavares, a rising Portuguese singing sensation, joined the Ministers for an encore. Then, the B.B. King Blues Band took the stage and electrified the audience. King performed several of his blues classics, including "Stormy Monday," "The Blues Man," "Ain't Nobody Home" and, of course, "The Thrill Is Gone." Just as it seemed the evening was at a peak, Portugal's own blues legend Rui Veloso came out to join B.B., and the two then played together in a memorable encore, with thousands of people screaming and dancing throughout the plaza.

"It was unbelievable," said Ambassador Tony Coelho, U.S. Commissioner General to Expo '98. "B.B.'s talent and generosity are amazing and I can't thank him enough."

The King concert was preceded by several special activities sponsored throughout the day by the U.S. Pavilion. To kick-off the National Day celebration, VIP's were met by the Sixth Fleet Band as they and the Color Guard led the entourage through the streets of the Expo official ceremony was celebrated with the gospel sounds of the Ministers of Music while Project Bandaloop gracefully danced down the wall to the soulful music.

Up to sixteen dance and musical groups as well as street performers made up an amazing day of talent. U.S. performers dominated the Promenade Stage, the second largest stage, throughout the day. Groups such as River Road, Up with People, the Ministers of Music, Native American Hoop Dancers, and Hawaii Children's Theater performed while Big Nazo, a life-size puppet act, thrilled audiences inbetween performances with their comedy routine.

in a full blown "American Style Parade". The Official U.S. Delegation, headed by U.S. Secretary of Education Richard Riley, appeared with Portuguese Government officials to raise the U.S., Portuguese and Expo flags. The

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Up to sixteen dance and musical groups as well as street performers made up an amazing day of talent. U.S. performers dominated the Promenade Stage, the second largest stage, throughout the day. Groups such as River Road, Up with People, the Ministers of Music, Native American Hoop Dancers, and Hawaii Children's Theater performed while Big Nazo, a life-size puppet act, thrilled audiences inbetween performances with their comedy routine.

in a full blown "American Style Parade". The Official U.S. Delegation, headed by U.S. Secretary of Education Richard Riley, appeared with Portuguese Government officials to raise the U.S., Portuguese and Expo flags. The

Before B.B. hit the stage, the Ministers of Music from Washington, D.C. warmed up the crowd. They, too, donated their appearance. Sara Tavares, a rising Portuguese singing sensation, joined the Ministers for an encore. Then, the B.B. King Blues Band took the stage and electrified the audience. King performed several of his blues classics, including "Stormy Monday," "The Blues Man," "Ain't Nobody Home" and, of course, "The Thrill Is Gone." Just as it seemed the evening was at a peak, Portugal's own blues legend Rui Veloso came out to join B.B., and the two then played together in a memorable encore, with thousands of people screaming and dancing throughout the plaza.

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Dr. Samuel Wilson, Deputy Director, NIEHS, served as a distinguished panelist at the National Day Scientific Symposium.

The highlight of the afternoon was the U.S. Pavilion sponsored "Year of the Ocean" Scientific Symposium at Expo's Jules Verne Auditorium. The event, designed to reinforce the important messages from the U.S. National Conference on the Oceans held just days before, drew a crowd of 750 members of the Lisbon diplomatic corps and representatives of the other country pavilions. For 90 minutes, the audience was treated to a thorough and exciting discussion of ocean-related issues by some of America's and the world's leading experts. The highlight was a live video link to the Pacific Ocean and U.S. Pavilion Official Spokesperson Jean-Michel Cousteau, who was underwater and could be seen and heard via satellite on the screen inside the auditorium. Cousteau, the son of this century's most famous ocean explorer, took several questions on how to preserve the ocean environment from students at the American International School in Lisbon.

Immediately after the symposium and before the B.B. King concert, Navy Secretary Dalton hosted a reception for Expo visitors aboard the USNS Pathfinder, which was docked at the Expo site not far from where Vasco da Gama departed on his historic voyage in 1498. The Official U.S. Delegation included Secretary Riley, Navy Secretary John Dalton, Ambassador Coelho, several Members of Congress headed by Representative Richard Pombo of California, several ocean experts including Dr. Sylvia Earle, and several prominent Portuguese Americans including author Katherine Vas.

The entire day was celebrated with the help of the 332 artists whose performances left an everlasting impression on the visitors and workers at the Lisbon World Expo '98. The groups who participated in making National Day a success are as follows.

**Artist Groups:**

- **Project Bandaloop** – Aerial Dance Troupe from Oakland, CA (8 members)
• The Ministers of Music – Gospel Choir from Washington, D.C. (33 members)

• River Road – Louisiana based Country Music Band (8 members)

• Up with People – Youth Performance Group known world-wide (150 members)

• The Sixth Fleet Band – Military Band based out of Naples, Italy (26 members)

• Native American Hoop Dancers – World Champion Hoop Dancer, Derek Davis accompanied by Michael Spottedwolf

• Hawaii Children’s Theater – Hawaiian based children’s group who bring alive the sounds of native Hawaii (16 members)

• Big Nazo – Life-size comedy/satire puppets (5 members)

• Military Color Guard – Led by Marines from the U.S. Embassy in Lisbon and Rota, Spain. (4 members)

• Air Dimensional Designs – A United States flag made of air tubes floated on the lake in the middle of the site to symbolize our National Day. The design was created by Doron Gazit, who is best noted for his amazing air figures that were featured in the Opening Ceremonies of the Atlanta Olympic Games.

• Regina Coeli Coro de Lisboa – led by John Leman, renowned Cincinnati conductor, performed Habaneras and American Spirituals (56 members)

• B.B. King – (14 members)

• Rui Veloso – Portugal’s own Blues King

• Sara Tavares – a new singer on the Portuguese scene. Her talent impressed Coca-Cola enough that they offered her a singing contract.

• DJ Bamba & the B-Boys – American born, Bamba energizes any stage with his mix of music and the B-Boys break-dancers (4 members)

Lombard Designs – Washington-based designer Lola Lombard, previously of Disney, designed and made costumes for the Parade.
VIP – Tour Procedures
United States Pavilion
Expo '98 Lisboa

1. Guests enter through Commissioner General’s Club door.
2. Guests sign “guest book.”
3. Guests are invited to have a drink in the Commissioner General’s Club
4. Guests are led into the Hall of Discovery and meet guide-TBD for the Pavilion tour
5. Guests view exhibits in the Hall of Discovery
6. Guests view exhibits in the Ocean Awareness room
7. Guests enter the Oceans Theater and proceed to their seats (guides will hold seats with "RESERVED" signs)
8. Upon conclusion of the movie, guests enter the Oceans Environment Room and they view the exhibits
9. Guests then exit through the merchandise shop, or back into the Commissioner General’s Club
10. A U.S. Pavilion gift will be presented to the head of delegation, etc. upon their departure
August
26 27 28 29 30 31

September
1 2 3 4 5 6 7 8 9 10

11 12 13 14

GLOBE students arrive
Old Lahaina Luau
Foxwood's Drum and Dance Troupe led U.S. Pavilion staff through the Pavilion entrance one last time. As a crowd looked on outside, the 31 members from the Pequot Nation treated visitors to one final traditional Native American dance performance. As in previous days, visitors could not get enough of the mesmerizing performance. Dressed in traditional costume, the Troupe gave a stunning drum and dance performance. After all Pavilion staff entered the Hall of Discovery, the final closing of the U.S. Pavilion was punctuated by a dramatic silence created when the drums stopped and the doors closed. An incredible four-month celebration of culture and the oceans had come to a close.
Cultural Program

A strong cultural program is an integral part of any country's participation in a World's Fair. In addition to the astonishing National Day line-up, the Pavilion sponsored several other groups. Promoting culture and tourism in the United States, groups such as a Hawaiian trio, Native American Drummers and Dancers, New York Modern dancers, California Cooking demonstrators as well as bands and wind ensembles all performed at Expo '98. The programming exposed Expo visitors to the incredible talent and history of America. There is no better way to give insight into one's country than through the heart and soul of its people.

### List of Cultural Events

- **Company Appells** - May 23, 1998
- **California Cookin' Demonstration** with John Pisto & Vasco Gallego - July 14, 1998
- **10th Avenue Jazz Band** - July 14, 1998
- **Community Band & Choir of America** - July 14, 1998
- **Bensenville Wind Ensemble** - August 7, 1998
- **Old Lahaina Luau** - September 13, 1998
- **Foxwoods Drum & Dance Troupe** - September 25 – 30, 1998

### Company Appells - May 23

Founded in 1979 by Artistic Director Jonathon Appells, performers enthralled spectators with their avant-garde ephemeral, site-specific nature dance work at Expo's Jules Verne Theatre.

### California Cookin' Demonstration - July 14

John Pisto, a California television network chef, was joined by Vasco Gallego, a well-respected local Portuguese Chef at Expo's Bar Cream for a cooking demonstration featuring seafood and wines from California. The show was broadcast in Portugal and the U.S.

### The 10th Avenue Jazz Band - July 14

A Dixieland Band based out of California, played background music during the California Cookin' Demonstrations. Later on that day, they played for Expo visitors on a stage in the North Section of Expo.

### Community Band & Choir of America - July 14

Led by two nationally known conductors, Dr. Leland A. Lillehaug and James Christensen, the 26-person Community Band & Choir of America performed at Expo's Bojador Stage in the North Area.

### Bensenville Wind Ensemble - Aug. 7

This Ensemble from Chicago is led by Conductor Fred Lewis. They travel throughout the United States and came to play on behalf of the U.S. Pavilion while on their European tour. They performed on the Bojador Stage.

### Old Lahaina Luau - September 13

As part of the closing ceremonies for the Hawaii exhibit, the Old Lahaina Luau attracted a huge crowd outside the Pavilion and then on Expo's Stage 2. This Maui-based trio consists of two musicians and one hula dancer, and performs the native music and dance of Hawaii. (See page 42 where Commissioner General Tony Coelho joined the Old Lahaina Luau trio for a dance outside the U.S. Pavilion.)

### Outreach

Making a lasting impression on visitors was a key component of the U.S. Commissioner General's guiding vision. Developing ways to sustain interest in the oceans and improving U.S. relations internationally was the focal point of U.S. Pavilion outreach activities.

Meeting face-to-face with Navy Officers in uniform, learning about new and exciting research discoveries made possible by research on marine organisms, and forging lasting partnerships and relationships with Portugal and America were all possible at the U.S. Pavilion.
After Expo '98, the U.S. Pavilion donated all of its office equipment to the American International School of Lisbon and donated its phone system to the U.S. Embassy.

Complimenting the Pavilion's strong educational and cultural programs, the outreach programs contributed greatly to making that "onward step" characteristic of all World's Fairs by promoting and fostering greater scientific and cultural understanding.

National Institute of Environmental Health Sciences Expo '98 Aplysia Program

"Undoubtedly, the star of the show, however, will be the Aplysias. The what? Aplysias - otherwise known as California brown sea hares - are large (up to 20 cm long) water snails used in the study of development biology, the nervous system, and the physiological basis of learning and memory.

Everyone who goes to the U.S. Pavilion is sure to talk about them because visitors are encouraged to dip their hands into the Aplysias' tank and pick up one of the creatures - rather like a lump of wet jelly! We were assured that the Aplysias don't mind being handled" -- Anglo Portuguese News -- 28-05-1998 in "Finger an iceberg, handle a sea-snailed U.S. Pavilion.

Part of major sponsor NIEHS's mission is to increase international public awareness about the National Institute of Environmental Health Sciences, the National Institutes of Health Aplysia Facility at the University of Miami, and how their activities benefit humanity.

The Aplysia Exhibit

The sea hares were housed in two 150-gallon touch tanks in the Ocean Environment room. As visitors exited the Oceans Theater, they encountered the tanks with 8-15 sea-hares in each. Surrounding the tank were exhibits on the Aplysia, designed to explain more about the significance of the organisms to research and human health, and to reinforce the information learned at the tank.

What Was the Aplysia Experience?

As visitors approached the tank, basic facts about the sea-hare were explained, including its lifestyle, eating habits, and basic physiology. NIEHS staff at the tank highlighted how our understanding of neurological disorders and conditions such as epilepsy, Alzheimer's disease and paralysis have increased because of sea-hare research, and that without it, many mysteries inherent in our own neurological system would be even farther from discovery. Staff members worked regular U.S. Pavilion hours and addressed any questions the visitors had. Both Aplysia personnel from the University of Miami as well as students from Portuguese universities stood by the tanks to promote public relations. Aplysia Department staff could communicate in Portuguese, English, French, German, Dutch, and Spanish.
Making a Difference

Another component of the Expo '98 Aplysia Program was to expand Aplysia research opportunities in international schools and universities. Since shipments of 50 new sea-hares arrived each week, the Aplysia Program donated the valuable animals. The main beneficiaries were Expo's Oceanarium, Bar-Ilan University in Israel, Universidade do Minho, and various Portuguese schools and universities.

Through the interactive learning process exercised with Pavilion visitors - a combination of outreach, education and involvement - the NIEHS Aplysia Program influenced the general public as well as created opportunity for international research collaborations.

Navy Officers

As part of its program at the U.S. Pavilion, the U.S. Navy provided two uniformed personnel from the Rota, Spain, base to greet visitors in the Ocean Environment and discuss the Navy exhibits. The uniformed officers, part of the U.S. Navy's sponsorship of the U.S. Pavilion, provided visitors with a unique opportunity to learn about the U.S. Navy's leading role in diving technology, ocean-related research, weather monitoring and responsible waste management.

Visitors, including the international media, were impressed with the Navy's presence at the U.S. Pavilion and the function served, noting that very few other Pavilions had staff on-site with such content expertise. From an international relations perspective, the U.S. Navy's presence in the Ocean Environment coupled with the NIEHS presence provided visitors with a broader sense of U.S. interests vis-à-vis the seas and human health.

The Luso-American WAVE Foundation

1900 L Street N.W., Suite 407
Washington, D.C. 20036

Established by Commissioner General Tony Coelho, the Luso-American WAVE Foundation is a non-profit organization dedicated to constructing a permanent memorial honoring Luso-Americans and to providing education and developmental support to the Portuguese communities, both in the United States and in Portugal. Donor contributions fund the memorial sculpture and the educational programs.

In an exciting May 25, 1998, ceremony at Expo '98, Coelho unveiled the Luso-American WAVE sculpture, the first major project of the Luso-American WAVE Foundation. During the ceremony, Coelho presented the sculpture as a gift to Jose Lallo, Portuguese Secretary for the Communities.

Commissioner Coelho stated, "This is a special day for me also. I am of Portuguese ancestry with both sets of my grandparents coming from the Azores." Standing overlooking the Tagus River, adjacent to the grounds of the World Expo, Coelho then said, "The Luso-American WAVE represents the wave of immigrants who trace their heritage to Portugal. The memorial will serve as a lasting tribute to the nation which is the ancestral homeland to 2.5 million Americans of Portuguese descent."

Commissioner General Coelho and State Senator (Mass) Marc Pacheco Riding the Wave

The sculpture is a memorial wall in the shape of a wave, standing 8.5 feet high and 60 feet long. The WAVE was designed by Stephen Frietch and architect Steven Spurlock. The sculpture was constructed by the renowned Portuguese firm, EDIMETAL, of Lisbon. Its base represents the roots of Portuguese-American immigrants in Portugal. The giant wave symbolizes the journey of immigrants across the ocean, and coupled
with its base unites Portugal, the sea and those families who immigrated, as one.

The WAVE itself will be inscribed with the names of Portuguese-Americans who register with the Luso-American WAVE Foundation.

U.S. National Day Congressional Delegation Members in front of the Wave

Host/Scholar Program

Recognizing the importance of providing students with opportunities to enhance their knowledge, experience, and understanding of the world, the U.S. Pavilion and Michigan State University partnered to provide an exciting opportunity for American college students to live, learn, and work as a part of Expo '98.

Anthony D. Branco is confident that the next few months will be the best time of his life. Branco and 17 other American

Ben Wilczynski, Becky Pecsek, Monla Lemos, Jenny Avelar, and Sonia Rodrigues

College students will be spending that time in Portugal, serving as volunteer hosts for the United States Pavilion at Expo 98 in Lisbon. A student at University of Massachusetts Dartmouth and a Westport resident, Branco said that he's honored and very excited to have been selected for the program. - Herald News - May 5, 1998 - "Student will travel to Lisbon for Expo '98"

The Expo '98 Host/Scholar Program, developed by the Colleges of Social Science and Agriculture and Natural Resources at Michigan State University, combined three elements in a creative educational experience.

- First, service as a national representative by being a volunteer host for the United States Pavilion.
- Second, an accompanying academic program that builds on the location and themes of Expo '98.
- Third, the experience of living and working in another country in an international setting.

As the public faces of the U.S. Pavilion, the host scholars worked every day at the U.S. Pavilion greeting visitors, answering questions, working at the hospitality desk stamping Expo '98 passports, and directing visitors from exhibit to exhibit. The Host/Scholars were an integral part of Pavilion life, ensuring its smooth operation as thousands of visitors streamed through it each day.

The U.S. Pavilion Host/Scholars, or "guides", alternated between working at the U.S. Pavilion and attending specially designed classes. While at the Pavilion, guides worked from open until close – 10:00 a.m. to 8:00 p.m. each day. When not at the U.S. Pavilion, the guides attended classes and had time off to travel and learn more about Portugal.

Jenny Avelar at the Hospitality Desk
Visiting the U.S. Pavilion

Ensuring U.S. Pavilion visitors had a positive experience was the role of the U.S. Pavilion's Protocol Department. The experience visitors took with them had a tremendous influence on how the U.S. Pavilion was received.

The U.S. Pavilion's Protocol Department hosted an impressive list of VIP visits (see page). Making each VIP guest welcome involved considerable planning and coordination. The U.S. Pavilion successfully hosted over 150 VIP visitors, and among them were 5 Congressional Delegations, 4 Cabinet Level Members, numerous Federal, state and local officials, and dozens of foreign official visits, including 2 heads of state.

U.S. officials, Prime Ministers, Ambassadors and other foreign dignitaries, astronauts, Hollywood stars, and Commissioner Generals from other Pavilions, all took the time to visit and enjoy the U.S. Pavilion experience.

“We are very proud of this superb exhibit,” said General Barry McCaffrey, Director of the Office of National Drug Control Policy at the White House on his July 17, 1998, visit to the U.S. Pavilion.

For a complete list of the U.S. Pavilion's VIP Guests please see page 40.

Dr. Robert Gagosian, Director of Woods Hole Oceanographic Institution thanks U.S. Pavilion staff by saying,

“You did a great job! Thank you for inviting me to participate. I really enjoyed it.”

The Protocol Department also hosted numerous dinners and functions including dinners, luncheons and receptions for visiting dignitaries and sponsors. The events took place in a variety of places including the Pavilion, the Commissioner General’s apartment, and onboard ships.

Become a part of the U.S. Pavilion at Lisbon World Expo ’98

Visitors who could not go to the U.S. Pavilion in person used the U.S. Pavilion website to join the experience. Over 600 visitors logged onto the U.S. Pavilion’s website Guestbook. They too commented on the U.S. Pavilion experience. Sonia Goncalves from Windsor, Ontario eloquently wrote,

“It's absolutely wonderful to see that millions of people all over the world will have a chance to see our beautiful country not only through this site but a chance for the world to discover Portugal and its people, as the Portuguese once discovered the world. It’s marvelous to see the world learning more about us, for these is so much to be learned! I miss my family very much and I love you all!”

Maria João from Lisbon, Portugal, wrote in the website Guestbook,

“I have been to the U.S.A. Pavilion at Expo '98 and I saw there very interesting and unknown things (to me). What I enjoyed the most was the film and its message. Congratulations”

Pavilion Press

Perception of the U.S Pavilion was shaped in large part by the press and its coverage. The U.S. Pavilion Press Team aimed to ensure positive and regular coverage in print as well as on radio and television.

The results were impressive. Extensive and international press coverage was due in large part to an active, energetic and aggressive press team. Regular media advisories and press releases generated widespread and accurate coverage of the Pavilion’s numerous activities, visits and projects. Following U.S. National Day, the
President of MEMORANDUM, considered one of Portugal's premiere clipping services, stated,

"The U.S. Pavilion received more coverage in one week than most pavilions had the entire duration of Expo '98."

In addition to advertising events and issuing releases, the press team stayed active and visible on the Expo site. Daily visits to the Press Center allowed contact with Expo press personnel as well as with hundreds of international journalists covering Expo '98. Establishing these contacts enabled the U.S. Pavilion Press team to effectively pitch stories and generated more coverage.

Journalists visiting Expo did not limit their activities to the Press Center. The bulk of their coverage took place at Pavilion sites. The U.S. Pavilion Press Team and other staff provided media with Press Kits and escorted tours at the Pavilion. Press staff arranged numerous on-site interviews with appropriate Pavilion staff for reporters covering the Pavilion.

The relationships, established early on, greatly enhanced U.S. Pavilion efforts and expanded coverage. During opening week, Tele-Expo, the Expo's media operation, assisted the U.S. Pavilion with editing and producing a video news release and selects used by CNN International. Tele-Expo also waved significant costs associated with the transmission of the National Ocean Conference, featured live at the U.S. Pavilion. In July, Tele-Expo's cooperation made possible the airing of the Virtual Canyon Project student trip to Expo '98 on KION, the CBS affiliate in Monterey, California.

The U.S. Press Team had similar positive relationships with the local print media, leading, for the most part, to positive coverage of U.S. Pavilion events. The U.S. Pavilion received extensive coverage from Portugal's major daily newspapers including Diário de Notícias (circulation 72,500), Público (70,000), and Jornal de Notícias (180,000). The U.S. Pavilion also received considerable coverage in Portugal's major weeklies. Expresso (circulation, 149,688), Noticias Magazine (250,000), and Semanário all covered the U.S. Pavilion regularly.

**Official Spokespersons**

Dr. Sylvia Earle and Jean-Michel Cousteau were the Official U.S. Pavilion Spokespersons. Retained to promote the U.S. Pavilion and events, they drew visitors and media. Jean-Michel Cousteau, the son of underwater legend Jacques Cousteau, held a very successful press conference at the U.S. Pavilion in early July, and received considerable media attention throughout his visit.

World-renowned deep sea explorer, Dr. Sylvia Earle, also a member of the U.S. Pavilion's Scientific Advisory Board, helped immensely with developing U.S. Pavilion themes and messages. In a surprise visit with GLOBE students early in September, researchers, teachers and students as well as the public were delighted to see Dr. Earle.
Operational Objectives
U.S. Pavilion 1998

Effective management of U.S. Pavilion daily functions ensured the smooth operation of the Pavilion. The operations department provided the backbone, infrastructure, and coordination for all public and staff issues. During construction from March 20—May 14, 1998, the operations staff worked as a liaison between Pavilion staff and contractors. Both material resource and project logistics were designed and implemented through Operations.

The Duty Officer acted as the Commissioner General’s representative; providing management on a daily basis throughout Expo and ensuring breakdown. The Pavilion Director managed the U.S. Pavilion. The two Duty Officers overseeing day to day operations reported to the Pavilion Director. Operations staff worked with Expo personnel, accreditation, park maintenance, emergency response, customs and all other responsible parties. Vehicles and other pavilion staff resource requests were provided and maintained by ops staff.

Rei de Limpeza, LTD provided cleaning services. Pinkerton Security staff were on staff both during and after working hours. Additionally, all guides, temporary Navy Personnel, and NIEHS staff worked in cooperation with operations.

U.S. Pavilion Operations Staff (Jorge Bizarro, Michael Bolelho, Andrew Meade and Jason Gropper)

The Duty Officer opened the building, maintained all AV equipment and corrected any technical difficulties. All problems were addressed immediately. In case of further difficulty, Certame provided on-site repairs both before, after, and during work hours. The systems manager working with the operations department provided staff and exhibit support including Internet connection and all networking. Helping with set-up for temporary exhibits, operations also provided labor and design consulting for the floor.

The operations staff developed a response plan in the event of system failure, natural disaster, or any other emergencies such as bomb threats, inclement weather, power failures, heating or AC problems, special visits and heightened security.

The operations staff received training from foreign service personnel and embassy liaisons in CPR, language, cultural differences, and general safety.

A/V Systems-
The A/V system works as a complete unit programmed to operate in several modes. “Day Mode” between 8:00AM and 8:00PM, “Evening Mode” between 8:00PM and 3:00AM, and “Night Mode” between 3:00AM and 8:00AM. Equipment is composed of a PC which controls all audio and visual pathways, hardcord video, multi-CD changers which relay music and sound to all rooms, Laser Discs, Queue line video, all video on exhibits, interactives, amps, TV monitors, and a Master Show Control and Theatre Show Control. Most important, all controls can be monitored from a secured and centralized location.

A/V hardware is “hot swappable,” easily replaced parts which can be replaced in a mission critical environment.

Sample Procedures as entered into the:
“Operations Log Book”

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Form Queue Line</td>
<td>JB</td>
</tr>
<tr>
<td>08:30</td>
<td>Receive security update</td>
<td>JB</td>
</tr>
<tr>
<td>09:00</td>
<td>Power Up Building</td>
<td>AM</td>
</tr>
<tr>
<td>09:30</td>
<td>Chk. A/V system and theatre sound</td>
<td>JB</td>
</tr>
<tr>
<td>10:00</td>
<td>Open Pavilion</td>
<td>JB</td>
</tr>
<tr>
<td>11:00</td>
<td>Walkthru</td>
<td>JB</td>
</tr>
<tr>
<td>11:30</td>
<td>Chk. Interactives</td>
<td>MB</td>
</tr>
<tr>
<td>12:00</td>
<td>Walkthru- 2 TVs in HUD out; reset</td>
<td>MB</td>
</tr>
<tr>
<td>14:00</td>
<td>Walkthru</td>
<td>AM</td>
</tr>
<tr>
<td>15:30</td>
<td>Refill log machine</td>
<td>AM</td>
</tr>
<tr>
<td>17:30</td>
<td>Walkthru</td>
<td>MB</td>
</tr>
<tr>
<td>19:30</td>
<td>Close Cue Line</td>
<td>JB</td>
</tr>
<tr>
<td>20:00</td>
<td>Close Building</td>
<td>JB</td>
</tr>
</tbody>
</table>

At the end of Expo, the Ops department remained on-site to manage breakdown and inventory of all items.

Activity Schedule

Pre-EXPO Phase
- Construction (March 9 - May 16)
- Lighting (April 9 - May 16)
- Hookups (May 4 - May 16)
- Furniture Install (May 4 - May 9)
- Run through and verification of systems (May 11 - May 16)
- Testing of emergency systems (May 11 - May 16)

Post EXPO Phase
- Dismantling (Sep 26 - Oct 15)
- Removal (Oct 11 - Oct 15)
- Restoration (Oct 15 - Oct 30)
General Management

The organizational structure of the U.S. Pavilion staff included three tiers. The first tier was General Staff and Host-Scholars or Guides. Pavilion Volunteers were also in this category. General Staff meetings were held daily at 19:00 hours. The Guide Team Leader attended General Staff meetings and was responsible for coordinating Guide assignments throughout the Pavilion as well as VIP tour staff. The Pavilion Director, or designate, managed the Guides.

The second tier was Senior Staff. Each Department was represented by at least one Senior Staff member. Senior Staff met daily at 10:00 hours. Senior Staff meetings were conducted by the Pavilion Director.

The third tier was Management Staff. This group, selected by the Commissioner General, worked directly with the Pavilion Director and assisted in policy decisions. Management Staff met every other day to review issues of a more sensitive nature regarding planning, budget and personnel.

The management structure of the U.S. Pavilion was hierarchical in order to provide clear accountability for each department. The style, however, demanded a high level of teamwork. At each level, personnel were required to coordinate closely both within their department and inter-departmentally.
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Lori Arguelles  
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Dr. Roger Mitchell and Ms. Judy Brown at the Aplysia Touch Tank
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Michael Botelho
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Dave Schupak
Bemle Taresco

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Lili Luiper
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