

**FOR IMMEDIATE RELEASE**

**Hitachi Announces Plan for Group Pavilion at The 2005 World Exposition,  
Aichi, Japan  
--Ubiquitous Entertainment Ride Using Mixed Reality--**

Tokyo, November 11, 2004 --- Hitachi, Ltd. (NYSE:HIT / TSE:6501) today announced that the Hitachi Group has completed details of its planned pavilion at The 2005 World Exposition, Aichi, Japan, to be called "Nature Contact- Hitachi Group Pavilion's Ubiquitous Entertainment Ride" ("Hitachi Group Pavilion"). The EXPO will be held from March 25 through September 25, 2005 at Nagoya Eastern Hills (Nagakute Town, Toyota City and Seto City).

A source of ideas for the coexistence of people and all other living things, Hitachi Group Pavilion will be based on two themes. One is the EXPO's theme, "Nature's Wisdom," which is made up of the two sub-themes called "Nature's Matrix" and "The Art of Life." The other is the concept of "realizing a ubiquitous information society through the use of sophisticated IT," which is the goal of the Hitachi Group.

The Attraction at Hitachi Group Pavilion will be based on the theme "Nature Contact - Interacting with endangered animals brought back to life by Hitachi IT" and have three acts: the pre-show, main show and post-show. The attraction will provide a "ubiquitous experience zone" where visitors can interact with endangered animals.

The main show is called the "Ubiquitous Entertainment Ride." It uses Mixed Reality(\*1) technology to recreate realistic images and dioramas of animals on the International Union for Conservation of Nature and Natural Resources (IUCN) Red List of threatened species on a global scale. This enables visitors to enjoy a "futuristic ubiquitous experience" in which they can interact with animals almost as if the animals were actually there. The ride will take visitors through five zones. Each realistically reproduces a diorama showing the environment where the endangered animals live and employs computer graphics to compose the dioramas with animals in real time. This Mixed Reality technology enables visitors to enjoy unprecedented excitement and thrills with a sense of mystery.

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EXPO admission tickets incorporate RFID (Radio Frequency Identification) IC chip, “μ-chip” developed by Hitachi, Ltd. At the registration area, the ID of each ticket will be matched with the ticket holder’s name and face allowing each visitor to enjoy personalized entertainment. Many services will use the “μ-chip”, including the pre-show and the post-show as well. (\*2)

The Ubiquitous Entertainment Ride at Hitachi Group Pavilion will offer 21<sup>st</sup> century entertainment in which interactive performances are created specifically for each visitor. By providing visitors with the invaluable opportunity to interact with endangered animals, Hitachi Group Pavilion will give people an understanding of the importance and beauty of nature, fostering visitors’ desire for the coexistence of people and animals. Another goal is to enable visitors to experience entertainment of the near future and to realize a ubiquitous information society through the Hitachi Group’s cutting edge IT.

Hitachi Group Pavilion will use numerous nature-friendly products demanded in the 21<sup>st</sup> century, such as fuel cells for mobile devices and bifacial photovoltaic solar module used inside and outside of the pavilion. In addition, the “3R” themes of reduce, reuse and recycle will be promoted through the exhibits. (\*3)

(\*1) The Ubiquitous Entertainment Ride With Mixed Reality

Mixed Reality is a sophisticated imaging technology that employs computer graphics to seamlessly compose a virtual world with actual scenery (the real world) in real time. The technology makes it possible to view three-dimensional objects from any angle as well as to enable interaction between visitors and mixed images. The result is a visual effect that cannot be achieved with conventional imaging technology.

Once on the ride, visitors will use a HHD (hand-held display) to view dioramas and to compose these with images of endangered animals in real time. This creates the impression that the animals are actually there.



Diorama



Diorama + Mixed Reality



HHD



Ride



HHD + Ride

Sensors enable monitoring the location of each visitor, making it possible to provide each visitor with a unique experience, such as by producing different views depending on the viewing angle of the visitor.



Scene viewed from the front



Scene viewed from the side

Moreover, interactive entertainment is possible by taking advantage of the greatest feature of Mixed Reality, the ability to compose actual scenes and computer graphics in realtime. It is even possible to have images of endangered animals react to the movements of visitors. For example, hand movements by visitors wearing hand sensors can attract the attention of an animal and allow visitors to feed it.



An interactive experience



Hand sensor

#### (\*2) “ $\mu$ -chip” services

Hitachi Group Pavilion will offer at all locations a variety of services that use of Hitachi-developed  $\mu$ -chip embedded in each EXPO admission ticket. This will allow providing services that match the preferences of each visitor.

#### Pre-show

Visitors can view endangered animals by using a Nature Viewer personal information viewer and an exhibition unit which uses “ $\mu$ -chip”.

#### Main show

The EXPO ticket ID is matched with the visitor’s name and face at the pavilion’s registration area. During the show, visitors are called by name, see their faces appear within the presentations and enjoy other forms of personalized entertainment.

#### Post-show

At the post-show, which visitors enter after disembarking from the main show’s ride, visitors will press their ticket over a  $\mu$ -chip reader to see photos of themselves with endangered animal on a plasma display.

#### Web site

Following a visit to the pavilion, individuals can view and download pictures of their visit during the post-show by visiting Hitachi Group Pavilion’s web site and entering

their ticket number.

(\*3) Environmental considerations

The Nature Viewer, which make extensive use of Hitachi Group technology, are powered by fuel cells designed for mobile devices during the pre-show. This will be one of the first applications for next-generation energy sources that will be instrumental in the ubiquitous information society. In addition, the waiting area outside Hitachi Group Pavilion will be equipped with bifacial photovoltaic solar modules developed by the Hitachi Group, which will provide part of the electricity used by the pavilion. Bifacial photovoltaic solar modules absorb sunlight on both sides to convert light into electricity more efficiently. Comparing to conventional single-sided solar cells under similar conditions, the bifacial photovoltaic solar modules produce yearly-generated around 30% more electricity each year. Furthermore, bifacial photovoltaic solar modules, which are installed vertically, can produce a consistent level of electricity regardless of their azimuth angle. This reduces the area required for installing these modules and free from lack of sunlight due to snow, dirt, bird droppings and other substances. Another advantage could be found when there is snow or sand on the ground, the modules can efficiently utilize sunlight reflected.

To address global environmental issues, the concrete, asphalt, wood and steel used in the pavilion is made entirely of reused materials. Furthermore, reused materials are employed in more than 95% of all building materials. Measures will be taken to reduce the volume of waste materials generated, and building facilities will be reused. Through these measures, the pavilion is strictly following the 3R concept of reduce, reuse and recycle to address global environmental issues.

**About Hitachi, Ltd.**

Hitachi, Ltd. (TSE:6501/NYSE: HIT), headquartered in Tokyo, Japan, is a leading global electronics company, with approximately 326,000 employees worldwide. Fiscal 2003 (ended March 31, 2004), consolidated sales totaled 8,632.4 billion yen (U.S.\$81.4 billion). The company offers a wide range of systems, products and services in market sectors, including information systems, electronic devices, power and industrial systems, consumer products, materials and financial services. For more information on Hitachi, please visit the company's Web site at <http://www.hitachi.com>.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.

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