

Honor Award

DREAM CUBE

Client Shanghai Corporate Community

Location Shanghai, China

Design Firm ESI Design

Design Team Edwin Schlossberg (principal designer), Frank Migliorelli (interactive design director), James Tu (interactive designer), Clay Gish (writing / research director), Chris Muller

(physical designer), Angela Greene (art director), Laura Gunther (graphic designer), Michael Luck Schneider (interactive systems designer), Trip Kyle (production director), Kris Haberman (project executive)

Fabrication Shanghai Pico Exhibition Services Co. (fabrication), Shanghai Guosheng Company Limited (construction)

Consultants Atelier FCIZ Architects/ Yung Ho Chang (architects), Spinifex Group (media producer), Full Flood (lighting), Production Resource Group (systems integrator)

Photos Basil Childers

Designing the **Dream Cube**

ESI Design's digital dreamscape delighted visitors to Shanghai's World Expo 2010. BY LESLIE WOLKE



Opposite: The animated exterior of the Dream Cube, made of a structure of recycled CD cases and thousands of LEDs, pulses with the movements and sounds of the visitors within it.

Below: From the queue, visitors ascend on an escalator, surrounded by bluish light and soft music, into the heart of the Dream Cube.

Jury comments

"A truly engaging interactive experience, with the actions of the audience changing the look and feel of the entire exhibit hall. A dynamic environment that holds together cohesively at every turn."

"EVERY PROJECT has the same set of challenges: How can we design and build a fresh, imagined world?"

Ed Schlossberg, founder and president of ESI Design (New York), has imagined immersive, engaging worlds in Times Square, Ellis Island, and Sony's New York headquarters. When his firm was asked to design the 2010 World Expo pavilion for the host city's corporate community, Schlossberg and his team conceived a groundbreaking concept that is equal parts ethereal and high-tech: Dream Cube, a multimedia journey through dreamlike physical environments and collaborative social spaces in which visitors shape their collective experience.

Simple mission, tight deadline

Sixteen months before the opening of the World Expo, Schlossberg and ESI received the commission to design a pavilion to represent the Shanghai corporate community at the global event. Dr. Shi Derong, Chairman of Shanghai Guo Sheng Group, led the group of more than 40 of the

largest corporations in China that were to sponsor the experience and the building that housed it.

Given this group of powerhouses at the table, the mission that ESI received was a surprisingly simple and gracious one: Express the companies' gratitude to the people of Shanghai. Schlossberg describes the breadth and humility of this creative brief as "a gift, both daunting and amazing."

The schedule was more than daunting; it verged on

the impossible. But with one of China's most accomplished architects, Yung Ho Chang (founder of Atelier FCIZ Architects) joining the team to design the pavilion's innovative skeleton and skin, the team was fortified for the design marathon. Together, they designed the experience from the inside out, starting with the visitor experience and defining the architecture to support and embrace it.

In the earliest phases of ideation, Schlossberg recalled

his love of traditional Chinese literature while a student at Columbia University. One story in particular came to mind as inspiration for the project: the fourth-century Chinese philosopher Zhuangzi's dream of being a butterfly, in which he ponders whether he himself is a butterfly dreaming that he is Zhuangzi. The transformative, ethereal, and captivating nature of this story became the name of the building and the experience inside it: The Dream Cube.



Below: The transformation of Shanghai from its origins to today was told with the help of thousands of images that ESI Design solicited from Shanghai citizens.

Realizing the dream

With the design of the building and its contents proceeding in tandem to meet the opening-day deadline, the ESI team and Yung Ho Chang worked together in an iterative and collaborative process. The scale and composition of the building is remarkable in itself: the 40,000-sq.-ft. pavilion is enveloped by 40 miles of polycarbonate tubes encasing LEDs. The LED tubes are set in a three-dimensional scaffold-like framework, creating a depth and subtlety when activated in vibrant animations

that sweep over the expansive digital canvas. The tubes were manufactured from used CD cases and cover 53,000 sq. ft. of area on the cube. “We think of it as a truss that suspends the modules of experience,” notes Schlossberg—similar to organs cradled in the skeleton of a body.

Shanghai’s self portrait

To thank the people of Shanghai as Dr. Shi had prescribed, ESI invited the citizens of the city to participate in the design process. On the Expo website, the project



team asked visitors to capture their vision of the city. To help contributors know what types of images they were looking for, ESI commissioned professional photographers to take on some initial assignments. "It is our responsibility as professionals to make amateurs great," Schlossberg explains. These examples amplified the quality and content of the public submissions "because they knew what 'good' looked like," he adds.

More than 80,000 photos were submitted. The team cataloged them by subject

Below: A meadow of LED rods responded to visitors as they approached and waved.

Jury comments

"An amazing experiential space. Children and adults can interact with this living structure. The use of color and light set the tone for each room. It could easily have been overdone, yet the controlled graphic quality actually makes the spaces understandable and exciting at the same time."



and color palette, and created immense digital landscapes to display the photos along the Dreamer's Path, a vibrant visual history of the city and its inhabitants. Layered high-resolution OLED monitors and scrims with projected shadows and animations enlivened the path through the stories of Shanghai.

This project to crowd-source the varied perspectives of a city of 28 million transformed the Dream Cube from a temporary

exhibit to a participatory multimedia experience from the web, to the pavilion, to a book celebrating the contributed images.

Along the Dreamer's Path, the interactive nature of the adventure continued. Thousands of LED rods of differing heights formed an ephemeral meadow. Visitors waved their hands over the digital grass, and colors changed in response.

Below: In Professor Butterfly's Control Room, the audience interacted in unison, creating a light show on the building's exterior.

Visitors as collaborators

The Dreamer's Path ended near a nondescript alley, where, as the audience approached, the walls parted to reveal a massive circular theater: the Dream Cube Control Room. Eighteen HD projectors washed the seamless circular screen above the audience with an interactive 20-minute film starring Chinese actress and director Xu Jinglei as Professor Butterfly.

The professor rallied the audience to take part in building the future of Shanghai and taught them that they

could interact with the digital exterior of the pavilion—the largest real-time interactive screen ever built—by waving and clapping in pattern and in unison. The exterior pulsed with the movements of the audience, transforming the individuals who entered the Dream Cube into a community of active participants, collaborating to enlighten and illuminate the Dream Cube pavilion, a state-of-the-art symbol of Shanghai itself.

Orchestrating a vast system of digital technologies to enact such an immersive and

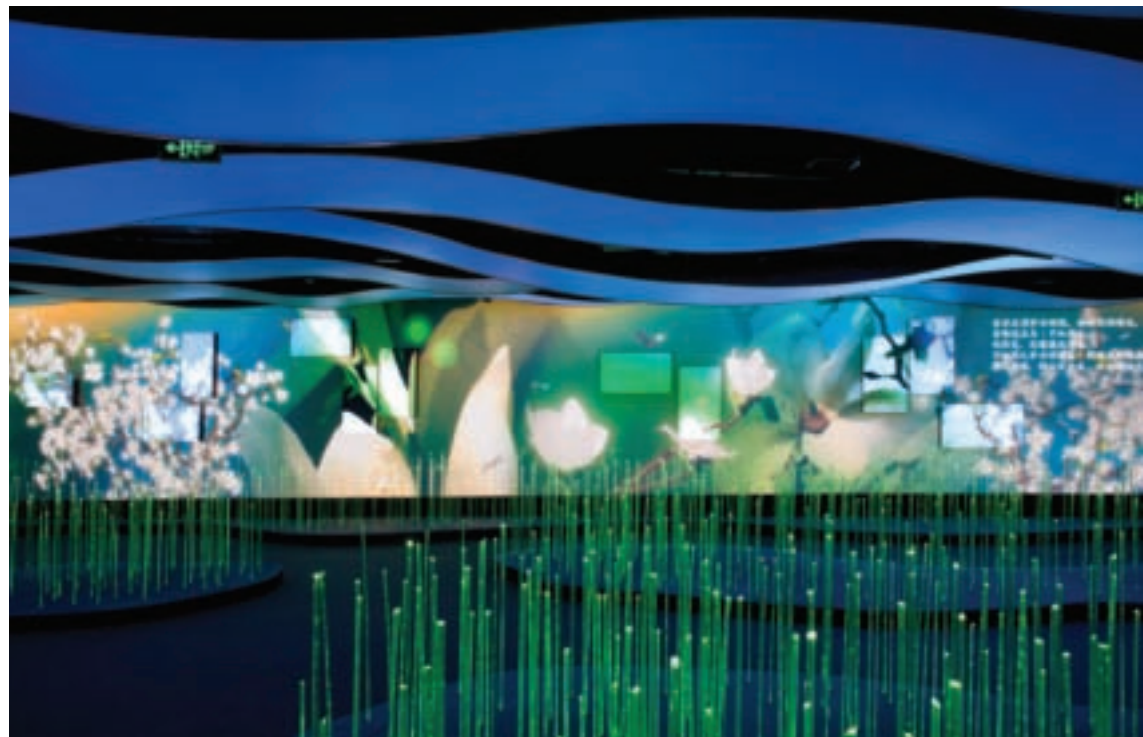
composed experience required intense collaboration across a range of disciplines and continents: Spinifex Group of Sydney produced all the media, most notably the Control Room experience. Production Resource Group (Hamburg) managed the technology integration, network, and system controls. Near the end of design development, ESI and its partners built the entire experience in Berlin for testing and client approval.



Tuning the visitor experience

In order to give all the pavilion teams time to hone their exhibits and performances, World Expo 2010 launched with a soft opening, welcoming 500,000 people the first day and 750,000 the next. Schlossberg and his team watched groups of visitors closely to see what interactions should warrant revisions. The media, lighting, and interactive systems were all built to be adjustable so that timing and presentation changes could be made as needed on site.

Below: A layered landscape of digital screens and projected images engaged visitors as they walked along the Dreamers Path, showing the change of seasons.



The design team learned a lot by watching the first groups of visitors during the interactive finale in the Control Room. Schlossberg remembered that Dr. Shi wondered aloud whether his Chinese compatriots would indeed follow Professor Butterfly's instructions to clap and wave. Would they be too reserved to play along? If so, the collaborative exuberance of the entire experience was in jeopardy.

The answer came quickly and loudly—the audiences erupted on each cue and left the theater in a cheerful clamor.

From his vantage point in the theater on those early days

of the World Expo, Schlossberg discovered clues about the visitors' level of engagement with the interactive film. When he saw people reach for the phone—to text or call—he knew their attention was waning. The glint of cellphones illuminated spots in the experience that were slow or lacking. His team assimilated that immediate feedback and tightened up the show. "All focus groups should carry cellphones—it's a great indicator," he marvels.

World Expo 2010 welcomed 73 million visitors over the course of its brief six-month run. The Dream Cube remained a favorite with visitors and

critics. Schlossberg notes, "It's bizarre to have something so good last for such a short time."

Experiences may be fleeting, but our memories of unique and ephemeral environments such as the Dream Cube stay with us, just as Zhuangzi's dream stayed with him. Every day, from May to October 2010, audiences dispersed from the Dream Cube sharing its secret: that they had been the source of its shimmering radiance. [X]

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