July 26, 2007

BUILDING MADE FROM WATER: MIT’s Digital Pavillion

by Evelyn

Ever imagine a building could be built from water? Brick, wood and steel are the materials one normally thinks of when it comes to creating buildings - hard substances that don’t flow, change or move over time. That’s why we are amazed by the creativity and ingenuity of some architects from MIT who designed a building which is composed in large part by water. Water makes up the walls and even the roof of this amazing new “Water Pavilion” from MIT.

Designed by brainacs from MIT in collaboration with dozens of other partners, the Digital Water Pavilion will make a huge splash at the Expo Zaragoza in Spain next year, the theme of the Expo being Water and Sustainable Development. Continuously recycled water cascading from the roof of the pavilion will form the four exterior walls and several interior partitions, while displaying various digital messages and pre-programmed graphics formed by actual breaks in the water. The pavilion itself will house a café, public...
area, and exhibition space for the water-focused Expo.

The covered roof, which can be lowered in case of too much wind, will be covered by what else, a thin layer of water. At the end of the day, the roof of the structure lowers itself into the ground, making the entire structure of the exhibit disappear. And if you’re wondering how to get into the building without getting drenched, not to worry, the MIT engineers have thought of that: the same technology that creates air gaps in the graphics also uses integrated sensors, giving anyone (or thing) that approaches the ability to part water, coming out dry on the other side.

Nicknamed Liquid Pixels, Carlo Ratti, head of MIT’s SENSEable City gives his simplistic explanation of the artistic water walls, “To understand the concept of digital water, imagine something like an inkjet printer on a large scale, which controls droplets of falling water.” The more technical aspect of the water wall technology explains how a row of closely spaced solenoid valves are opened and closed at high frequencies, controlled by a computer creating gaps at specific locations in the wall.
Expo Zaragoza 2008 promises to be a gathering of sustainable minds, all there to discuss issues of Water and Sustainable Development. And what better piece of stunning architecture to bring that theme home than the Digital Water Pavilion.

Whether or not you’re more interested in the technology of the Digital Water Pavilion or just the fact that its so darn cool, one thing’s for sure: the Digital Water Pavilion will leave you thirsting for more.

+ Digital Water Pavilion
+ MIT
Responses to “BUILDING MADE FROM WATER: MIT’s Digital Pavillion”

1. Tyler Says:
   July 26th, 2007 at 7:17 pm
   
   I can’t wait to build my house that emerges quietly from the still waters of the Florida Intracoastal Waterway, with an endless labyrinth of water walls. However I would only program certain walls to “open” when people approach, making a journey through my house a hydrological game of Russian Roulette. I love this!

2. Michael Says:
   July 27th, 2007 at 9:57 am
   
   Simply beautiful.

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