

## Croatian Pavilion at EXPO 2008 in Zaragoza

At the Expo 2008 in Zaragoza (Spain), Croatia presented in its pavilion the project **A Drop of Water, a Grain of Salt**. AVC Zagreb found its place in this project as the A/V system designer and got the privilege to contribute also with the delivery of equipment and with complete A/V system integration on-site.

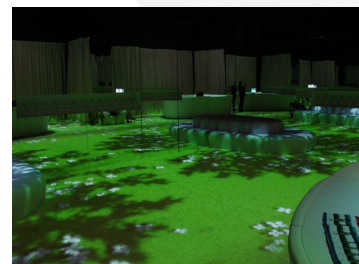
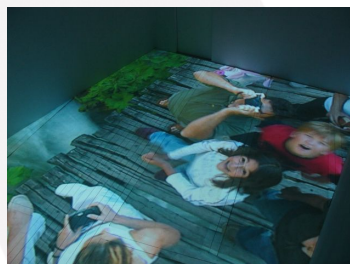
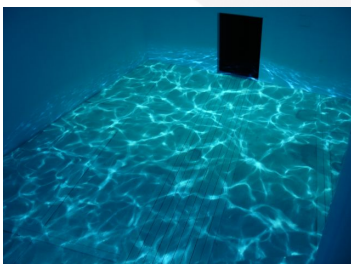
The AVC Zagreb engineering and installation team successfully accomplished this project and once again presented itself with a powerful and impressive installation. Please find hereafter the detailed description of the equipment used in different halls of the pavilion:

### Entrance hall

This part of the system was made of optical fibers (delivered and installed by the company Hal d.o.o., Croatia) hanging from the ceiling driven by DMX gateway and AMX central control system. With animacy of the waving optical light-dots and four-channel audio system (with a total of 16 loudspeakers) the visitor was able to get a realistic under-water feeling.

### Exhibition hall

The video system was conceived around the video presentation from the ceiling over the salt basins and four additional projections on the side walls. The floor projection with its dimension of 10x7m has been realized with two Panasonic PT-D7700E DLP projectors in split-screen mode. Every projector was showing half of the picture with one meter overlap. The great working Panasonic edge-blending function made this job easier. Because of the lack of height in the pavilion booth, the projections had to be projected using a 45° mirror. The projector support with mirror was completely designed and



manufactured by AVC Zagreb. Side-wall projections have been made with four Panasonic PT-D5700E DLP projectors. Since the task was to make these projections as vertical as possible to avoid disturbance of projection by walking visitors, significant digital vertical keystone had to be done in video material production.

The exhibition hall had also a video motion-detection system that was realized with four IC cameras, quad switcher and video to firewire converter. It gave the possibility to change floor projection in correlation with the visitor's movement.

The audio system was an eight-channel system consisting of 16 loudspeakers. Eight JBL Control 24C speakers (usually used as an in-ceiling speakers) were hidden in the floor beneath the salt. Another eight JBL Control 25AV speakers and two high power JBL ASB6118 subwoofers were installed above the gallery. The amplification was done by CROWN amplifiers, the processing with DBX crossovers. Video and audio playback was realized with Apple MacPro and MacMini computers.

#### **Stairs (to the Exhibition hall gallery)**

The system was made of water-bubbles' projection over the stairs, rain projection over the front wall and two vertically orientated plasma screens. Panasonic PT-D4000E DLP projectors and TH-50PH10E plasmas have been used. As a video player an Alcorn McBride Digital Binloop solid state system was used. A four-channel audio system with a total of eight JBL Control 25AV speakers followed the video projections.

#### **Exit hall (water bar)**

Again we had to consider the lack of height in the pavilion and we had to use split-picture system with approx. 1m overlapping. In total four Panasonic PT-D4000E DLP projectors gave an approx. 12x8m picture on the floor. Each of the two overlapped projections has been made with two stacked projectors which gave full redundancy of the system and high brightness but also hard work with picture position, colour and brightness adjustment. A total of about 20 hours (net) have been spent to adjust the floor projections in Exhibition and Exit halls.

The audio system was a four channel system realized with eight JBL Control 25AV speakers and

CROWN amplifiers.

### **Management of the system**

The audio/video/light system was controlled by AMX central management system mostly using RS232 ports and relay ports for Exhibition hall's door opening. The system was pre-programmed in scenes. Using a control interface, the complete system was turned on and off by one touch button. Also the projector diagnostics was possible (lamp hours, air temperature etc.). The scenes were launched using the designated switches located on four places within the pavilion. A non-technical person could very easily operate the system.

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Links:

Video [Water Bar Floor Reflection](#)

Video [Projections Over Salt Basins](#)