ESA, Noordwijk, the Netherlands

Efficient concurrent design team collaboration

"With its multi-windowing and 3D capabilities, the Barco CADWall has allowed us to improve our concurrent design process."

Massimo Bandecchi, Head of ESA's Concurrent Engineering Section and Concurrent Design Facility

The European Space Agency is Europe's gateway to space. Its mission is to shape the development of Europe's space capability, conceiving future space missions and developing the related systems.

The new Concurrent Design Facility (CDF), located in the Netherlands, is at the heart of ESA's conceptual design philosophy, using concurrent engineering techniques and the latest in communication and audio-visual aids to prepare the new projects. This improved facility allows for more effective collaboration between all parties involved in the design process.

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Parallel design analysis in 2D and 3D stereo

Barco partnered with AVEX to implement a three-channel CADWall system with an XDS-1000 display management system. The award-winning XDS-1000 runs the XDS Control Center software suite, which allows users to control all sources simultaneously with mouse and keyboard in a Windows desktop environment. It is also fully networked, and enables the engineers in the design facility to upload their designs to the display wall, as well as retrieve designs from it. In addition, the XDS-1000 makes it possible to view 2D and 3D stereo information at the same time.

The equipment that takes care of the high-resolution image consists of three high-brightness Galaxy 12 HB+ projectors. Barco's three-chip DLP Galaxy 12 HB+ has all the necessary features on board that make it an excellent choice for a multi-channel setup. While its edge blending technology eliminates blurry overlap zones where projections converge, its DynaColor and linked constant light output (CLO) technologies match colors and brightness levels across the display. This results in one uniform, high-resolution image without quality differences.

Professional presentations and efficient decision-making

In addition to the six-meter wide screen used as an integrated canvas, AVEX also installed a Barco iCon H500 projector for an auxiliary screen used for presentation purposes. Like the CADWall, users can use mouse and keyboard to freely display multiple sources simultaneously, and use the Windows desktop interface to select sources and layouts. The single-chip DLP iCon H500 offers a light output of 5,000 lumens and a full 1080p HD resolution, and is equipped with a sealed optical engine that extends the system's lifetime dramatically.

Faster collaboration

Mr Massimo Bandecchi, Head of ESA's Concurrent Engineering Section and the Concurrent Design Facility states: "With its multi-windowing and 3D capabilities, the Barco CADWall has allowed us to improve our concurrent design process, particularly with regards to our interfacing with engineers via video conference. We have managed to integrate a complex audio visual, state-of-the-art system into a user friendly, multi-disciplinary design environment"

Project summary

Company

Name: European Space Agency
Location: Noordwijk, the Netherlands
Products and services: space exploration
Website: http://www.esa.int

System specifications

Projection system: three-channel CADWall
Resolution: 3.6 megapixel (total image)
Contrast ratio: up to 1,800:1
Display management: XDS-1000
Partner: AVEX

Barco nv
Presentation & Simulation Division
Noordlaan 5, 8520 Kuurne, Belgium
Tel. +32 56 36 86 00 - Fax + 32 56 36 84 86
email: contact.bps@barco.com

Ref.no. R5990131 - June 2008

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