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CASE STUDY

AV Technology for Conference Halls

▶ left

A general view of the conference hall in full configuration, looking towards the front of the hall.

▶ right

Another view of the room, this time looking towards the rear. The control cabin can be seen behind the group of fixed seats.

ABOUT THE CUSTOMER

Reval Hotel (located in Riga) is one of Latvia's largest hotels, and possesses the largest conference hall in the region.

THE REQUIREMENT

Create a multipurpose space with enough flexibility to allow it to be used as a single large area and also as two independent halls, each self-sufficient in all aspects of AV work. Changing from one configuration to the other must be as fast and smooth as possible.

Given the large size of the room, a system for making speakers visible to the audience during the course of presentations was also part of the requirement.

THE CHALLENGE

A large number of different types of input at multiple locations and different formats had to be managed in two separate configurations with no switch-over problems in a large total area.

Long transmission distances plus complex signal switching requirements and multiple display options made this a challenging design environment.

THE SOLUTION

A centralized switching system with intelligent control system made it possible to manage the diverse configurations seamlessly. PIP insertion systems inset the speaker's image into the presentation.

THE PROJECT DETAILS

To solve the "picture-in-a-picture" problem, a system was implemented where signal feeds from five video cameras were sent to a Kramer PIP-500 image inserter. One output is a "quadrant" display of four selected video cameras, and the other one is a programmable output capable of displaying a composite image from all five cameras on a single screen.

To provide compatibility for all signals, video input signals were scaled to the RGBHV standard. This ensured proper display and simplified transmission systems design by using a single type of signal for long distance communication.

Kramer VP-725DSA scalers were used to scale and process all incoming signals that were not previously processed.

All incoming video signals were routed through a Kramer Sierra 3232V5R matrix switcher. This unit, together with a VS-1616A offered unparalleled levels of flexibility in signal handling, plus the ability to work in sync with the video matrix switcher to ensure correct follow-through for each change in input-output.

CUSTOMER BENEFITS

As per customer's specifications, the hall serves either as a large single space or as two separate rooms. All signals are routed via the central switching setup and scaled there to ensure that every display device receives its image at an optimal setting.

The system as installed offers optimal performance in any of the specified modes of operation and has growth potential due to a modular design which together with centralized control makes it possible to transparently add functionality.

The main advantage of this installation is its flexibility. It allows for different configurations to be chosen and used without any undue difficulties for the hotel's personnel while ensuring optimum image quality levels in every configuration.

Kramer VM-1055 and VP-11 amplifiers transmitted the signal from the control room to the projectors. VP-11 is particularly well suited to solving issues of cable length and signal attenuation. High-resolution coaxial cable was used to connect the projectors.

The installation was completed by an AMX control system. Two control panels that operate independently but allow full control of the whole room as well as two keypads in each partial room controlled light levels plus basic control functions for presentation systems. Sound was based on a Soundcraft audio mixing console and a Bosch simultaneous translation system.

APPLICATION DIAGRAM

This diagram illustrates the relationships between the different system components. Note that the VP-715 has been superseded by the VP-419.

Cables:

Composite and s-Video cable

VGA cable

Audio (line level) cable

Machines:

Sierra 3232

VS-1616A - Balanced Stereo Audio Matrix Switcher

VP-725DSA - ProScale™ Presentation Switcher & Computer Graphics/ HDTV Scaler with Picture-In-Picture

PIP-500 - Multiple Picture-In-Picture Inserter & Quad Splitter

VP-11 - Computer Graphics Video Processor

VM-1055 - RGBHV Distribution Amplifier

KRAMER ELECTRONICS, Ltd.

3 Am VeOlamo St.
Jerusalem, 95463, Israel
Tel: + 972 2 654 4000
Fax: + 972 2 653 5369
E-mail: info@kramerel.com

www.kramerelectronics.com

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