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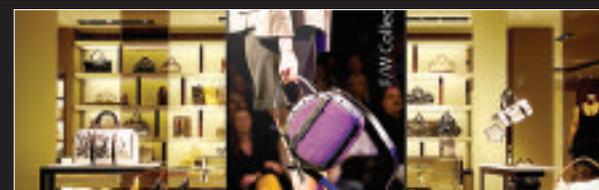
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Trends in AV
Mergers and acquisitions



Center stage
Hong Kong theatre upgrade



Mature market
Large format displays

In the zone
Hotel opts for 5 star audio



Modern hotels need to provide a variety of services and facilities to their patrons if they desire to be classified amongst the best. Hurrairah bin Sohail examines how S K Office Solutions ensured that the JW Marriott in Pune, India met its guests' AV needs.

Five star flexibility

Hotels are unique when it comes to AV installations because the user of the facility cannot always be accurately pinned down. The profile for those staying at a hotel may differ immensely from one guest to the next making it difficult to design and implement a project. AV systems for hotels must be flexible enough to accommodate the needs and requirements for any of the patrons that choose to stay at the venue.

It is no surprise then that the task facing S K Office Solutions, when they were chosen to handle the audio and visual needs of the JW Marriott in Pune, India, was immense. The system integrator was given the job to design, execute and complete the entire facilities for the hotel. These included a PA system for public areas, back of house (BOH) and guest floors as well. In addition AV systems for the business center, meeting rooms, banquet halls, restaurants, nightclub, spa and poolside were also required.

The system integrator was given one prime directive which Sachin Jain from S K Office Solutions details: "I was told to design an AV system befitting a five star hotel that aspires to be the best in the country and one

“ I was told to design an AV system befitting a five star hotel that aspires to be the best in the country and one of the best in the world in its category. ”

- Sachin Jain, S K Office Solutions

of the best in the world in its category. The technology infrastructure should meet this aspiration.”

Public address system

The JW Marriott Pune spans 40,000 square feet and can comfortably accommodate 2,000 guests. With a number of different facilities and spaces provided by the hotel, the main task for S K Office Solutions was to ensure that proper, intelligible audio was delivered.

Jain explains the considerations for the audio products chosen: "Lab.gruppen, Tannoy and Biamp were the preferred (audio) brands for sound reinforcement across the hotel. These brands were chosen for their

quality and ability to perform even in the harshest conditions. We were aware that maintenance at hotels can be challenging for their internal team. Thus we needed equipment that could survive the heat and dust and still perform.”

Jain details the core components of the public address system: "The PA system uses architecture where three Biamp AudiaFLEX units with input/output cards are housed in a central rack. The music and audio for each zone is routed over CobraNet to CobraNet distribution boxes in various zones in the hotel.”

The JW Marriott Pune makes use of music streaming software Music Styling for playback in different areas of the hotel. The music for various areas is streamed from a PC and fed as an input to the Biamp AudiaFLEX

The Banquet Hall comprises three ballrooms





Tannoy rock speakers were used for outdoor areas in restaurant, spa and pool

system. Distribution is achieved by collating feeds of analog output from CobraNet distribution boxes to Lab.gruppen amplifiers located across the venue. The amplifiers in turn drive the loudspeakers around the hotel.

Special requirements were stipulated for how the public address system would function. Jain explains further: “Each floor of the hotel has been configured as a separate zone and each zone is provided with Biamp RED Ethernet control device to control the volume of the zone manually.”

He continues: “The Biamp RED unit at each zone has the capability of selecting a music channel from multiple channels input at the central rack. However, as per guidelines from Marriott, the operators are not allowed to choose the music channel from a basket of available channels and the streaming channel input is dedicated for the particular zone.” A variety of Tannoy loudspeakers have been chosen for providing sound in the public areas.

The public address system can also interface with the emergency evacuation system. Jain talks about how the two work in tandem: “As soon as the fire alarm panel detects an alarm for a specific floor, the music on the floor stops and a recorded message starts playing. This message can be overridden by a paging microphone, which in turn can be overridden by a fireman’s microphone.” Biamp digital microphones have been provided for the purposes of paging.

For the BOH areas Ateis PA speakers with fire rated back cans have been used. The speakers were chosen because the areas require emergency announcement functionality only and the Ateis products provided cost efficiency for this purpose. The car parking facility is also equipped with Ateis wall mounted, horn type loudspeakers.

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Individual audio systems

Besides providing accommodation to guests, the JW Marriott also offers a selection of dining options to its patrons. These areas required special attention with regards to the audio system installed. Jain sheds further light: “In 3 Meal Dining (located on the ground floor) and the vegetarian restaurant (located on the first floor) some portion of the ceiling had a different look with wooden bars. The ceiling did not have a flat hard surface with provision to install ceiling speakers. The ceiling speakers had to be suspended from the true ceiling with a drop.”

Besides the technical challenges, the restaurants also had their own specific demands for the audio system. Jain continues: “The client also had a specific requirement for aesthetically appealing design. For this purpose designer looking speakers from ‘Everything But the Box’ were used at these specific areas. Portions of the ceiling with gypsum false ceiling used Tannoy loudspeakers.”

The hotel also boasts outdoor restaurant areas, spa and swimming pool where once again the requirement for audio systems was different. Jain states: “For outdoor areas in restaurant, spa and pool rock speakers from Tannoy have been used. These speakers provide a

good outdoor look with weather proof housing.”

Specifically for the spa, S K Office Solutions had to tailor the audio system to ensure the proper results were achieved. Jain says: “At the spa, each treatment room was provided with an Aux audio input. The guests have the option of attaching their personal music device. The system was designed to be intelligent and to auto-detect the personal music device. As soon as the system detects the personal music device, the background music in the room immediately stops and the personal music starts playing.”

For the nightclub at JW Marriott Pune Coda from Germany has been used along with Coda processors, Biamp DSP for routing and Coda amplifiers. Each VIP area at the venue has its own individual sound system with independent volume control that is provided with the help of Biamp RED-1 units.

Another interesting area with regards to its audio system is the banquet hall, which comprises of three ballrooms that can be divided into individual spaces or >

Tech-Spec

- Audio**
- Ateis SPA-1120 power amplifier and PA speakers
- Beyerdynamic OPUS wireless microphone system and TG-X 58 dynamic microphone
- Biamp AudiaFLEX CM system, Networked Paging system, Nexia VC digital signal processor and RED-1 control system
- Coda subwoofers and loudspeakers
- Extron MDA-6A, MDA-3A amplifier
- Lab.gruppen amplifiers
- Renkus-Heinz digitally steerable array
- Tannoy loudspeakers

< utilized in tandem. Jain says regarding the installation: “For the banquet halls a provision has been made to connect up to 48 microphones for audio processing at the front of the ballroom or at the rear of the ballroom when all the three ballrooms are used in a combined room mode.” The 48 channels of input are carried to a Biamp DSP on CobraNet. There are also program inputs provided for different sources that can be carried back using AV over Crestron twisted pair wall plates.

There is also a provision to connect microphones on XLR wall plates in the banquet halls. These microphone inputs are again connected to a Biamp CobraNet input box and have Phantom Power on/off for podium microphones. All the inputs from the banquet hall ground floor are fed into two Biamp AudiaFLEX units via CobraNet. Digitally steerable arrays by Renkus-Heinz are used for sound reinforcement. These arrays are installed in a niche in the wall and covered in the front with acoustically transparent fabric.

Jain recounts an interesting anecdote related to the installation of equipment at the banquet hall. He narrates: “I clearly recollect issues relating to ground noise. At one stage during trial runs, we could hear a lot of ground hums and spent hours isolating the source of the hum. We inspected each and every termination, equipment and connection in the system. We used various instruments to measure electro-magnetic interference and RF interferences. We ensured all electrical sources were properly grounded and the electrical bus was also grounded.”

He concludes: “After spending a couple of days, the problem was traced to the Crestron twisted pair wall plates that were grounded in the banquet hall below using a different electrical ground. We then connected the wall plate to the ground being used for the equipment rack and the problem disappeared.”

Lastly, business center meeting rooms and conference rooms have been provided with wireless handheld microphones and neckworn microphones. Microphone inputs and program audio inputs are fed into a Biamp unit and ultimately reinforced using Tannoy ceiling speakers.

Tech-Spec

Visual

Christie Roadster HD18K projector

Epson EB-G5200W projector and EB-W8 projector

Projectiondesign F32 projector

Vutec projection screen

Control

Crestron CP2E control system, light dimmer and automation system, MPS-200 multi-media presentation system and TPS-6X 7in wireless touch panel

Visuals and control

The business center meeting rooms at the JW Marriott Pune are also interesting for the visual solutions that have been deployed. Jain states: “The business center



[Top to bottom] Paasha restaurant, dining in the hotel, outdoor area and the exterior of the hotel

meeting rooms have been designed scientifically for video reproduction for each of the meeting room. InfoComm standards have been followed in selection of the proper screen size and projector.”

In light of the aforementioned standards to uphold Vutec screens and Epson projectors with 16:10 aspect ratio were selected. The Epson projectors provide WXGA resolution and a brightness of 4,000 ANSI lumens. The brightness level of the projector was decided based on the screen size and ambient light variations.

Wall plates for AV inputs have been provided at two locations on the front of each room and one plate on the rear of each room. The rooms are designed for use for different forms of events and multiple wall plates flexibility with regards to the configuration of the room. Different video sources such as set top box or DVD player have been also provided.

Moving on to the banquet hall, S K Office Solutions has provided three motorized screens for each of ballrooms as well as a large fixed frame screen for when the ballrooms are used together as one large space.

Full HD projectors were selected from Projectiondesign for the ballrooms when they are used individually while a Christie Roadster HD18K for the combined mode projection. Crestron wall plates with twisted pair transmitters have been provided at different locations for computer and video presentation.

The video inputs are received by Crestron twisted pair receivers and connected to Extron scalars. The scaled HD output is sent to a Crestron 32x32 switcher chassis. The output to each projector is again sent over twisted pair transmitter-receivers into an Extron scalar and into the projectors.

Sony PTZ cameras were provided in the banquet hall to capture and record any event if required and a Tascam DVD recorder has also been installed for this purpose.

Control duties for the AV systems are handled by Crestron products and Jain says that they were chosen due to Crestron’s engineering support for their products. Automation was provided in each of the business center meeting rooms and the banquet hall by way of fixed wall mount touch panels. Wireless touch panels were also provided in the banquet hall control room which can also be taken to the ballrooms if required.

Lighting automation in various areas of the hotel was also done using Crestron products which can be found in areas such as the spa, banquet hall, night club, restaurants and main lobby.

On the whole, Jain believes that S K Office Solutions has delivered on the brief provided. He does however highlight an area which can be improved. He says: “As the hotel has not appointed any professional agency for maintenance of the system, they have not been able to make use of the system as I would have wanted them to.”

In his opinion: “They could have achieved more than what they have been doing. With this thought, I think we could have done with very basic installed system. However, even today if the hotel decided to use a professional agency for their installed AV systems, it can provide a lot of convenience to its guests and translate into increased revenues.”