

# Giudizio Universale

MICHELANGELO AND THE SECRETS OF THE SISTINE CHAPEL

Ha debuttato il 15 marzo, all'Auditorium Conciliazione di Roma, uno show eccezionale che intreccia arte e spettacolo.

*Giudizio Universale. Michelangelo and the Secrets of the Sistine Chapel* è uno spettacolo prodotto da Artainment Worldwide Shows con la consulenza scientifica dei Musei Vaticani. Protagonista assoluta è la Cappella Sistina, uno dei luoghi più incredibili della storia dell'arte mondiale, qui al centro di uno spettacolo che sposa l'azione fisica della performance teatrale alla magia immateriale degli effetti speciali, mentre lo spettatore, immerso nelle proiezioni a 270°, si ritrova al centro stesso dell'evento.

Ne è ideatore Marco Balich, uno dei creativi italiani più noti a livello mondiale che ha firmato eventi importantissimi, quali diverse Cerimonie Olimpiche, compresa l'ultima di Rio, e la direzione artistica del Padiglione Italia all'Expo di Milano.

Balich ha raccolto intorno a sé una squadra di

creativi che sarebbe difficile ipotizzare di più alto livello, da Sting a Stufish – lo studio fondato da Mark Fisher – continuando un elenco che sarebbe troppo lungo snocciolare su queste poche righe.

“Con *Giudizio Universale* – racconta Balich – abbiamo voluto creare uno spettacolo completamente nuovo, in cui la genesi di un capolavoro dell'arte universale viene raccontata mixando tutti i linguaggi che il mondo del live entertainment ci mette oggi a disposizione; il tutto nel più rigoroso rispetto dell'opera di Michelangelo.

“Abbiamo voluto i più grandi talenti mondiali del settore – prosegue – che abbiamo coinvolto grazie all'esperienza accumulata in anni di grandi cerimonie come quelle olimpiche, un lavoro che ci ha insegnato a iniettare nelle nostre creazioni i due ingredienti più importanti per la riuscita di uno spettacolo: emozione e autenticità”.

Parole che racchiudono tutte le ambizioni e la grandiosità di uno spettacolo da 9 milioni di euro di budget.

Parte rilevante nella produzione hanno avuto le tante aziende tecniche, anch'esse leader mondiali nei rispettivi settori, che hanno scelto di associare il loro marchio a questa impresa, con la fornitura del materiale utilizzato, come sempre aspetto delicatissimo e fondamentale per la riuscita dello show.

**Osram** sarà presente con alcuni marchi di prestigio come Claypaky e ADB

“In qualità di azienda leader nell'illuminazione per l'intrattenimento – osserva Hans-Joachim Schwabe, CEO Specialty Lighting in Osram – siamo molto orgogliosi di aver collaborato a questo show innovativo. Lo show *Giudizio Universale* è un altro prestigioso incarico che ci permette di mostrare al pubblico le nostre competenze”.

I lighting designer Bruno Poet e Rob Halliday utilizzano infatti per lo show numerosi apparecchi Claypaky e ADB: con i loro effetti a mezz'aria, i potenti fari motorizzati di Claypaky incantano ed entusiasmano gli spettatori, mentre la luce calda dei proiettori teatrali di ADB genera un'atmosfera immersiva, che suscita forti emozioni. Fra gli apparecchi utilizzati sono protagonisti Warp e Scenius Unico, che impiegano la tradizionale tecnologia con lampada. Al loro fianco una gamma di apparecchi basati sulla tecnologia LED, ciascuno utilizzato per creare un effetto particolare, come le barre Shar-Bar e ShowBatten, che generano barriere di luce colorata; gli strobo Stormy, che simulano fulmini e saette; le teste mobili Axcor 300, per velocissimi effetti a mezz'aria; il washlight K-Eye con la rivoluzionaria tecnologia HCR, che inonda il palcoscenico e il pubblico di magnifici colori. Infine il celeberrimo proiettore Svoboda di ADB che, con i suoi fasci concentrati di luce calda ed uniforme, è stato scelto per creare un effetto quasi mistico.

**Bose Professional** partecipa a questo grande spettacolo come audio partner. Infatti tra i numerosi progetti audio al vaglio della produzione, da integrare nel concept di Balich, il supervisore William Geroli ha selezionato la proposta avanzata da Bose Professional, coadiuvata in seguito, nella fase d'installazione, dai professionisti di Auris Populi. Visto l'obiettivo di far sentire il pubblico immerso fra le immagini e i suoni, l'impianto audio era di fondamentale importanza, poiché doveva rappresentare l'ideale punto di incontro tra ambientazione acustica in 3D, surround video e gradevolezza estetica. “L'installazione va oltre il normale surround 5.1: se conteggiamo i punti interessati si tratta di un versatile sistema 9.4 – spiega Moreno Zampieri, Responsabile Tecnico di Bose Italia che ha seguito la progettazione dell'impianto. “Relativamente all'audio abbiamo scelto il progetto di Bose Professional perché, a fronte della

garanzia sulla timbrica e potenza sonora, ha saputo ottimizzare il rapporto tra l'efficacia dell'esperienza audio immersiva ottenibile e il numero di punti audio necessari per ottenerla”, ha affermato lo stesso Marco Balich.

Importantissimo rilievo avrà anche la tecnologia **Sennheiser**, rappresentata in Italia da Exhibo, che offrirà agli spettatori provenienti da tutto il mondo la possibilità di assistere allo spettacolo nella propria lingua. Saranno infatti utilizzati ben 500 ricevitori del sistema TourGuide 2020, completi di cuffie, in grado di lavorare contemporaneamente riproducendo dialoghi e voci fuori campo in inglese, cinese, giapponese, francese, tedesco, portoghese, russo e spagnolo. Il sistema Sennheiser, partner tecnico dello show, opera in radiofrequenza digitale: i ricevitori captano il segnale diffuso dagli otto trasmettitori in regia, dando la possibilità allo spettatore di selezionare la lingua desiderata.

Anche **Panasonic** è presente con alcuni dei prodotti di altissima gamma che hanno già dimostrato il loro valore in eventi di primo ordine. Lo show vede infatti lo schieramento di ben trenta proiettori laser ad alta luminosità; così il grande show *Giudizio Universale* sarà l'occasione per replicare il successo dei proiettori PT-RZ31K (31.000 ANSI Lumen) PT-RZ21K (20.000 lm) e PT-RZ12K (12.000 lm), già dimostrato in altre prestigiose occasioni internazionali.

Non vediamo l'ora di poter assistere allo show e raccontare tutto nei dettagli ai nostri appassionati lettori. ■



Marco Balich.



# Sistine Secrets

Mike Clark travels to Rome to unveil the technical secrets of *Giudizio Universale*, an immersive production that has Italy's most famous art at its heart . . .

*Giudizio Universale. Michelangelo and the Secrets of the Sistine Chapel* is a 60-minute, €9m multimedia spectacular that takes audiences on a multi-dimensional journey into the art of the Sistine Chapel. Produced by Artainment Worldwide Shows, with the scientific advice of the Vatican Museums, and under the patronage of Italy's Ministry for Cultural Heritage and Activities and Tourism, the show runs at the Auditorium Conciliazione and follows the story of Michelangelo's masterpiece, from commission to completion.

The Sistine Chapel is the 'protagonist' of a show combining theatrical performance with the magic of high-tech special effects created by artistic director Marco Balich. The show's original theme song was arranged and interpreted by Sting, whilst the soundtrack was written by John Metcalfe (producer and arranger for U2, Morrissey, Blur and Coldplay). For the production elements, Balich brought together a hard-to-beat creative team comprising: Stufish Entertainment Architects (scenography), Luke Halls (immersive projections), co-lighting designers Bruno Poet and Rob Halliday, and Fotis Nikolaou (choreography). Meanwhile, the show's technical partners include Bose, Osram, Panasonic, Riedel and Sennheiser.

## SCENOGRAPHY

Stufish designed the stage for *Giudizio Universale*, creating a beautiful immersive experience for the audience. Partner Alicia Tkacz explains: "The concept was to immerse the audience within the Chapel's frescoes by creating a physical vault over the auditorium seats and providing a 270° digital projection surface. Spanning 27m at a height of 12m, the vault provides an area of over 1,000sq.m of projection surface that becomes the physical manifestation of Michelangelo's imagination and ultimately reveals the Sistine Chapel in its entirety."

As the Auditorium Conciliazione is not primarily a theatrical space, the team designed a false proscenium to frame a more traditional staging area, providing space for scenery and choreographed performance. The geometry of the arched proscenium offers further projection surfaces and incorporates physical spaces used in the narrative, such as the

Room of Tears, the sacred space where a newly-elected Pope reflects on the momentous ministry lying ahead.

One of the most challenging parts of the process was fitting the very large, ambitious set design into an existing space almost without touching it. As the auditorium is a listed building, Stufish had to ensure the design, particularly the vast structure of the vault, sat independently inside the space without damaging it. This was achieved by having the entire auditorium laser scanned so they could work with an accurate 3D model to successfully fit everything inside.







Photo: Montesi Antonello



Photo: Riccardo Ghilardi



➊ From top: Lulu Helbek, co-director; Marco Balich, co-director  
Above: co-lighting designers Bruno Poet (left) and Rob Halliday (right)  
➋ Luke Halls, video and projection designer



Tkacz adds: "What sets the show apart is its ability to combine historical story and fact with modern and cutting-edge technology, which makes it relevant to all ages. We can draw many similarities between Michelangelo and some of the modern day artists we typically work with. His art of immersing the audience in light and imagery within the Sistine Chapel can be compared to the art of modern-day rock stars, with the power to offer the audience a divine experience."

**PROJECTION**

Marco Balich and Lulu Helbek (the show's co-director), invited Luke Halls to work as projection designer, responsible for conceptualising, designing and animating the projected element of the show. Halls and his team were tasked with working out how to best fit the Chapel into the new space, sensitively add animation to the frescoes, and scale up the frescoes without overwhelming the production. To achieve this, Halls utilised various techniques including hand-drawn 3D and 2D animation, 'puppeting' of the characters featured in the frescoes and architectural 3D mapping of the Chapel, blending all this into a cohesive style.

Explaining how and why some of the show's video effects were used, Halls says: "In *The Fall*, in which Adam gradually appears, the character was cut out and 'puppeted' so we could

add very subtle movement to bring him life. He was then animated with a dappled effect based on our research of the fresco painting process used by Michelangelo."

Another example of fusing video and choreography is a fascinating scene in which dancers and aerial artists perform in front of blurred shots of their movements. To realise this, Halls recorded the scene in slow motion to obtain more frames and enable him to then speed up the footage and create a long-exposure 'trail' effect.

Regarding the clarity of the large close-ups of fresco details projected on the proscenium, Halls explains: "The entire canvas we worked to was just over 16,000 pixels wide and the proscenium area was around 9,000 pixels wide." Describing the scale and ambition of the production, he adds: "It was an interesting mix of a very theatrical creative and a very touring / commercial scale. I think my experience in both worlds really helped me complete the project."

For the majority of projection surfaces, it was decided to use Serge Ferrari's Soltis Horizon 86-2167 Concrete, a mesh material with high dimensional stability that exhibits little change over time, making it indispensable for long-running shows. Other mesh products or gauze would have had to be re-stretched every few months. Soltis is also sufficiently acoustically transparent to allow loudspeaker enclosures to be mounted behind it and ensures reduced weight, tensile strength and good breathability, enabling air conditioning to operate efficiently.

On stage, there are two scrims (down-stage and mid-stage) in Showtex GoblinTulle

"It was decided to use the venue's stage as a starting point and build a second deck 50cm above, creating a space hosting stage mechanism, automation, cables and tubes for the fog and haze machines . . ."

Giandomenico Barbon

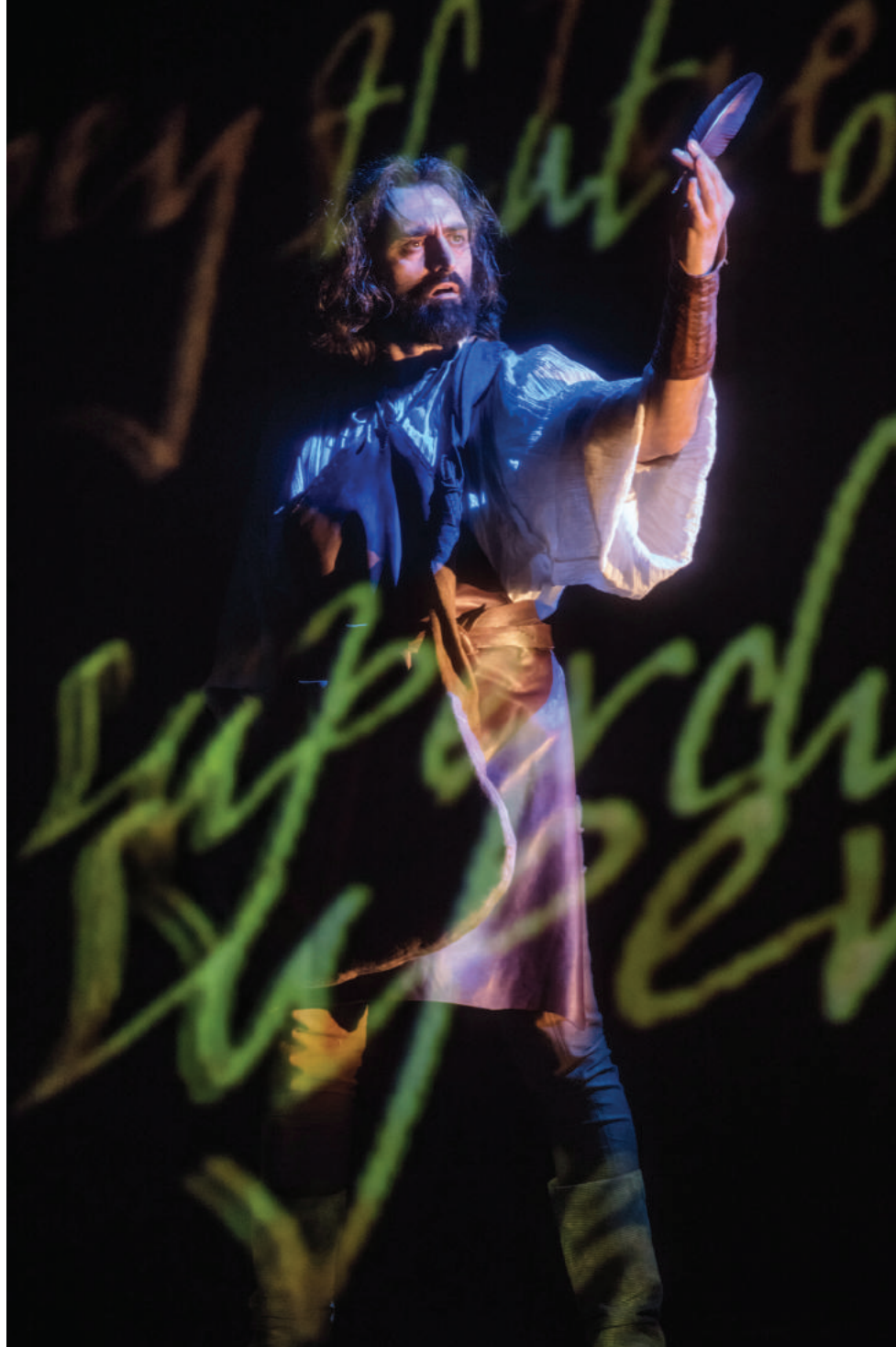
Sharkstooth dark grey gauze, and the side and curved top masking is also by Showtex.

Event Management supplied the video equipment for the show, as well as the interface between automations and players. The company's Daniele Parazzoli explains: "The 30 laser video projectors are all Panasonic 3-chip DLP Solid Shine models, 18 PT-RZ31 31K, 10 PT-RZ21 21K and two PT-RZ12K units. Our disguise d3Net network consists of four d3s: a gx pure master, two 4x4pro slaves and a 4x4pro understudy. The setup's matrix is a Lightware MX-FR80 80x80, and digital signal transmission is via HDBaseT over fibre."

Event Management also deployed a 2,560px by 1,408px motorised, centre-opening 3.9mm pitch Esdlumen Dazzle LED display. Four 30K Panasonic projectors are installed on each side wall of the room; two 20k projectors (with two on backup) are on-stage (on the mid scrim), while 12K units are used on the replica David statue, mounted on towers on either side of the room 26m from the proscenium. Also on each tower, two 30K units cover the proscenium area, whilst another projects on the rear part of the vault. The remaining projectors, installed in three boxed-off areas in the stalls seating, cover the remainder of the vault.

#### LIGHTING

Bruno Poet is known for his extensive work across theatre, opera, dance and live music events. He has been awarded with two prestigious Knight of Illumination Awards, one of which was for Danny Boyle's *Frankenstein* at the



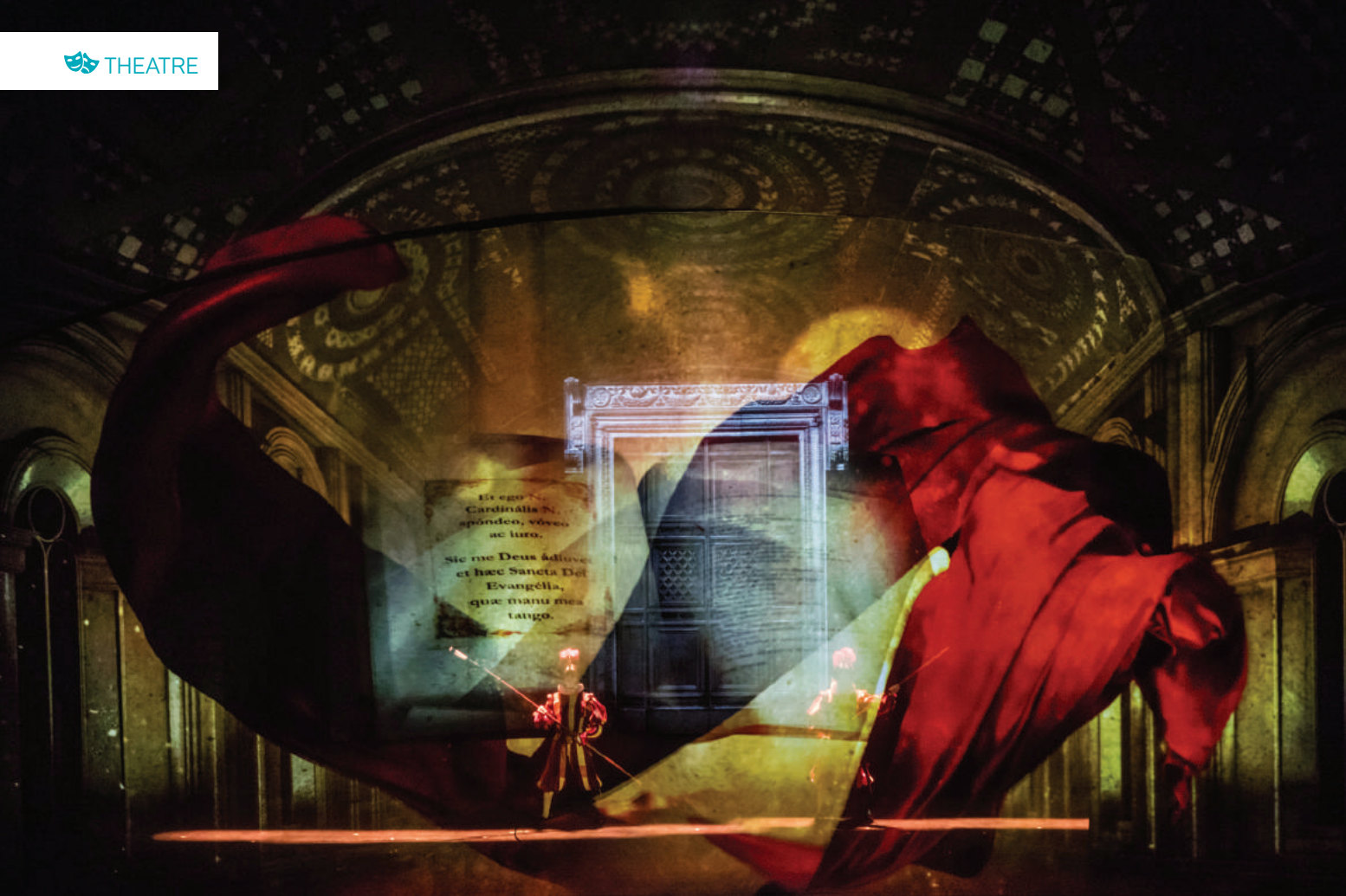
National Theatre, which also won him the 2012 Olivier Award for Best Lighting Design.

Before becoming part of *Giudizio Universale*, he had already worked with Balich on two of his *Intimissimi on Ice* shows at Verona Arena. For *Giudizio Universale*, Poet began working with Helbek, Balich and the set designers on initial ideas and concepts in June 2017. He explains: "Rob Halliday and I worked together, workshopping ideas and developing a lighting plan and synopsis of lighting ideas for the show, and Rob did all the detailed work alongside Lulu in the tech."

All light sources come from the show's lighting partner Osram, with the arsenal including the ADB Warp and Claypaky Scenius Unico, which use traditional

lamp technology. Alongside these, an assortment of LED fixtures from Claypaky include the SharBar and ShowBatten for colourful light barriers; Stormy strobes emulating dramatic, realistic lightning; the Axcor Beam 300 for fast-moving, mid-air beams, and the K-EYE with its HCR technology washing the stage and audience with beautiful colours. The *pièce de résistance* is the ADB Svoboda, with 49 nine-lamp lighting battens used to create the show's hypnotic final 'sun' effect with warm, powerful, solid light beams.

Poet explains the choice of fixtures: "Claypaky hosted us at their Bergamo HQ, where we tested all their kit, much of which I'd never used before. We chose the Scenius Unicos for their intensity and flexibility - we needed the shutter blades and their ability to frost very soft. We also needed them to do a very bright



narrow beam at times. The Axcor 300 Beams were perfect for the 'dance of the stars' section of the show because we needed narrow laser-like beams of light. We were excited to find out that Osram also owns ADB, which gave us access to the Svoboda light batten, one of my favourite units, which provides the look for one of the key moments of the show."

As well as 48 channels of 3kW and 27 of 5kW ADB Eurodim Twin-Tech dimmers, lighting is controlled FOH via a main ETC Gio console - with an IonXE on backup duties - and Net3 DMX and ShowControl gateways.

Halliday has been lighting artists and performances of all types worldwide for over a quarter of a century and recently donned his speaker's hat to give industry members at the MIR expo in Rimini an interesting and amusing insight into his work on *Giudizio Universale*, his first involvement in a Marco Balich production. He explains: "Although Bruno was working on the new *Tina* musical in London, he agreed to work on *Giudizio Universale* if he could do it with someone else - jointly come to the meetings, have the concepts, figure out the rig and talk about what it should look like. He wouldn't be there for tech, so the other person would make it all work in practice."

"We've worked together quite a lot over the years, with me programming shows for him or re-lighting operas for him, but I think the fact that I also work as a designer in my own right made it sort of a 'marriage of equals' in Artainment Worldwide Shows' eyes, and that's pretty much the way it worked. We were both at all the pre-production meetings, tests and trials. We did the original rig design together - he'd draw some of it, I'd draw the rest, we'd take turns editing it and cutting it down. The big lighting moment at the end of the show was an idea of his refined by me."

He adds: "We had late night iMessage sessions during the tech, comparing notes. It's actually great fun and very helpful to have someone slightly detached from the process who can listen

to a day's worth of issues and respond with a clear thought!" Halliday was aided and abetted at the venue by his assistant Robin Senoner and production electrician Daniele Giuliano.

Laser Entertainment has supplied five Kvant Atom lasers complete with Pangolin's Beyond control system for the show: a 15W pure diode unit and four 9W HPS units, all with Cambridge CT 6215 scanner sets. The lasers' use is extremely effective as the brief was not to use them in a conventional manner - no saturated colours or geometric shapes - but in a more 'organic' way, blending into the lighting and the audience.

Halliday adds: "An interesting challenge on this show was smoke and haze, because for most of the show haze wasn't wanted (because the projectors' beams would have been seen). But for a few key moments - lasers, the beams of light in the auditorium for the 'star dance' section and end section, and of course, the final moment - it was, so it had to be figured out how to get it into the space quickly and then how quickly it would go away. The huge projection surface underneath the auditorium's air vents meant air handling was a bit of an unknown! Thanks to the help of the building's air-conditioning guy, we found the right balance of airflow and temperature to keep the room cool enough but not drive all of the haze out of the place when we needed it."

#### SOUND

In recent years, sound designer, sound editor and field recordist Mirko Perri has been responsible for sound design or effects for films by some of Italy's best-known directors, such as Paolo Sorrentino, for whom he worked on *The Great Beauty*.

For *Giudizio Universale*, Perri handled the creation of the show's non-musical sound using both computer-generated and real sounds. He explains: "Generally speaking, my approach is to always start with real sound sources even when I need to obtain abstract atmospheres. I record in studio or on location, then process with Symbolic Sound's Kyma workstation - a *modus*

*operandi* I prefer, as I find the resulting sound more organic and complex from the point of view of timbre. However, I don't disdain electronic or digital synthesis, which I use to enrich the end product."

Although Perri's sound plays a fundamental role throughout the show, one particularly striking part is the excellent low-frequency effect achieved during a scene set in a marble quarry, which brings the falling rubble and rocks and moving blocks of marble to life.

The Bose sound system comprises main L/C/R plus stage-front subs, L/R surround, rear surround, delay L/R and 'over' L/R - an impressive 9.1 setup. Each of the main ShowMatch DeltaQ clusters comprises two SM5WG55 waveguides, two SMS 118 subwoofers and six SM5, whereas the centre hang is formed by three SM5, an SM10, two SM20 and two SMS118 subs. Down-fills are an SM10 and an SM20 per side. Stage-front, six more SMS118 subs and six RoomMatch Utility RMU208 are on front-fill duty. L/R surround speakers are seven RMU208 per side, delay consists of an RM12040 per side and rear surround comes from four RMU208s. The 'over' speakers are four pairs of RM12060 configured in stereo and flown above the audience; stage monitors are six RMU208s. The powerhouse consists of a combination of Powersoft's X8 Dante and PM8500N amplifiers. In spite of the number of enclosures deployed, only the rear surround speakers and two delay enclosures were partially visible, as the rest of the rig was concealed behind the projection surfaces.

Moreno Zampieri of Bose Italy explains: "This system creates an incredibly detailed immersive sound environment that draws audio details on the same surfaces on which the lighting and projectors draw their visual effects. I was responsible for

the concept of the rig, and during installation we made a few changes to meet the requirements of audio supervisor William Geroli."

The sound material is fed to the amplifiers via a Dante network from the local Yamaha Q5 digital console in sync with multi-channel AV media players. A useful feature of the system is the possibility - in the event of fault anywhere along the device chain - of switching from default digital Dante feeds to analogue backup, thanks to the automatic backup strategy on X8 amps and a GPIO connection between the console and the ESP system DSPs.

William Geroli was responsible for the technical supervision of the entire audio department and worked with Rome-based system integrator and Bose partner Auris Populi on the final release of the project, co-ordinating and supervising the PA set-up.

With lengthy experience in the world of live events, Auris Populi became involved in the project at the beginning, when Bose was chosen as the main audio system, with design work entrusted to the technical department of Bose's Milan branch. Sergio Scarpellino of Auris Populi explains: "We were responsible for the executive design of the amp racks and signal distribution, then continued with the system's installation, start-up and tuning."

The audio playback set-up comprises a pair of Mac Pros running in parallel with a Pro Tools session 9.1. The Q5 console routes the signals to the amp racks, whilst eight SR 2020s enable the show's voiceover to be heard by the audience in eight different languages via 500 Sennheiser EK 2020 DII receivers and 500 MX365 double earphones.

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In collaboration with composer John Metcalfe, Geroli mixed the Pro Tools session and playback of the various parts of the audio project - including the music, Mirko Perri's sound design and the voiceover.

Meanwhile, the show's Riedel intercom system comprises an Artist 32 digital matrix, a DCP-1016 16-key desktop control panel, 22 C3 digital beltpacks and PRO-D1 Intercom headsets, and 16 Bolero. Of the set-up's three antennas, two are positioned FOH and the third on a balcony near the stage to cover that zone.

#### AUTOMATION & PROPS

Technical director Giandomenico Barbon was responsible for co-ordinating the requirements of the location, production, engineers, suppliers and creative team, which he achieved by keeping an updated 3D plot used as the masterplan for the entire team. As well as his work as technical manager, Barbon's company Creative Systems also designed, realised and supplied set and automation for the show.

He explains: "It was decided to use the venue's stage as a starting point and build a second deck 50cm above, creating a space hosting stage mechanism, automation, cables and tubes for the fog and haze machines."

The stage and set includes: a 4m diameter revolve; two motorised scrimms on double-chain chaintrack systems with swipe movement; two black backdrops on identical systems; six motorised side drapes; six recessed trolleys supporting the panels representing blocks of marble in the quarry scene; two sets of side scaffolding supporting proscenium set elements - the Room of Tears on one side and a ladder and platform on which the

Pope appears briefly on the other - and a metallic monolith as the block of marble containing the statue of David.

Barbon adds: "The scrim and backdrop systems are particularly interesting as they use top and bottom systems running in sync on which the fabrics are mounted in such a way as to be taut as soon as they appear on stage and remain taut even when retracted, as they're fixed to the chain every 10cm."

Automation is controlled via motors with high-resolution absolute encoders, ensuring precise positioning and optimum repetition. The Movecat I-Motion control system used consists of 10 V-Motion drives, two E-Stop emergency system interfaces and an Expert T3 desk.

The show's prop art direction, including the creation of the faithful replica of Michelangelo's David statue, dramatically revealed during the show by a splitting block of marble, is by Plastikart Studio of Cesena.

#### SISTINE HIGHLIGHTS

*Giudizio Universale* is an impeccably meshed combination of projected images, dance, lighting, music, sound effects and speech - the voice of Michelangelo is that of actor Pierfrancesco Favino and in the English version, Susan Sarandon is 'the voice of the Bible'.

Picking out highlights is no easy job, but serious contenders must be the 3D render of St Peter's Basilica that rises up from nowhere; the projections of cardinals walking along the walls towards the conclave, who become real people when they reach the stage; or Michelangelo's ascent from the stage (with the aid of an invisible MCC Theater

gantry) to begin painting before 'the galaxy scene' - also one of Halliday's favourites. The room is filled with countless ringing bells to celebrate the nomination and a tall chimney appears in the audience, complete with white smoke to indicate the successful vote. Performers (including the character of the Pope) also make forays into the audience . . .

A more subtle highlight comes in the form of an LED display representing a closing door, with light on the other side of the door vanishing in perfect sync with light on the stage floor as the virtual door 'closed'.

Scenes in which the performers merge with the paintings projected behind them (as in Adam and Eve's dance and the storm scene - incredibly realistic thanks to a large fan, Perri's sounds and the Claypaky strobes) are also wonderfully effective. Halliday explains: "This can only be achieved by fine-tuning several important details, such as the angle of the light, the colour of the light and the position of the performers in relation to the projections - if they're too close they cover the painting, and if too far away become two separate things instead of merging."

Artainment president Simone Merico says: "This is the first production of Artainment Worldwide Shows. The company gave life to a new kind of entertainment: live performances where the emotional codes of the show and contemporary visual languages meet art. We have worked hard over the past three years on the definition of a new business entertainment model that, starting from Italy, can be exported around the world."

So, when in Rome (as they say), don't miss *Giudizio* . . . 