

“David Bowie Is”

Taking the art and technology of music exhibition several steps forward

By: Judith Rubin

"We thought about it thematically. We never saw this as being a retrospective, summing-up kind of show. So what we thought we'd try and do is crush time completely—that's one of the things he's interested in. So the captions are written in the present tense."

— Geoffrey Marsh

"Bowie can pull off a VERY wide trouser leg."

— Dan Stubbs, NME

"The most striking thing about the show is that it is brought to life by technology and united in sound and vision in a way rarely seen in a museum."

— The New York Times

"David Bowie Is," the new traveling exhibition at London's Victoria and Albert Museum, cocurated by Geoffrey Marsh and Victoria Broackes, opened to the public March 23. By then, it was already a blockbuster success with advance ticket sales well past the 68,000 mark, more than triple the V&A's previous record for presales. The party on March 20 was attended by the likes of Boy George, Tilda Swinton, Laura Carmichael, and Bill Nighy. The exhibition finished its V&A run August 11, and it will be at the Art Gallery of Ontario in Toronto September 25 – November 27.

Blending attraction design, exhibition design, and theatre, "David Bowie Is" presents two galleries of memorabilia and costumes from David Bowie's substantial personal archives. The 300-plus objects on display include Ziggy Stardust bodysuits, set designs created for *The Diamond Dogs Tour*, storyboards, handwritten set lists and lyrics, and some of Bowie's own sketches. Visitors may also want to keep an eye out for Brian Eno's "Heroes" synthesizer in the concert area.

Heading the creative team were exhibit and AV designers 59 Productions (Mark Grimmer, creative director) and Real Studios (Mike Hawke, lead designer). Lighting design was provided by dha designs. (Directors Adam Grater and David Robertson shared project management responsibilities). A Bowie exhibit would neither be complete nor satisfying without music, and its state-of-the-art, customized sound experience is by Sennheiser. Displays, videos, and interviews are coupled with zone-specific audio delivered via the personal headsets of Sennheiser's guidePORT system. The headsets come off



'All art is unstable. Its meaning is not necessarily that implied by the author. There is no authoritative voice. There are only multiple readings'



DAVID BOWIE, 1980

David Bowie is all around us. His influence on contemporary culture is arguably greater than any other musician of his generation. His contributions to music, performance, fashion and design are milestones of our era.

David Bowie showed us we could be who we wanted to be. In the '70s he promoted individualism and freedom of sexuality. He continues to inspire artists, designers, musicians and many followers with his distinctive persona and style. In six decades he has thrilled, surprised and delighted audiences with incomparable speed and vision.

The exhibition you are about to enter tells this story through costumes, film, photography and set designs, as well as more personal items such as musical staves, storyboards, lyrics and even diary entries. The exhibition reveals the breadth of Bowie's influences and explores his creative processes, and, in turn, his influence on our world.

The exhibition was supported by the US State Department through the Fulbright Program, administered by the Fulbright Commission, London.



for a climactic, immersive concert experience in the second gallery, offering the first public showcase of Sennheiser's Auro 3-D systems. Norbert Hilbich, Robert Genreux, and Sennheiser's "Tonmeister" Gregor Zielinsky headed the Sennheiser applications engineering team, which collaborated closely with exhibit designers: V&A's Tom Grosvenor and sound designer Gareth Fry, who came to the job fresh off designing the soundscape for the opening ceremonies of the 2012 London Olympic Games.

The 59 Productions team also included project manager James Roxburgh, assistant designer Molly Einchcombe, lead video designer Lysander Ashton, lead animator Zsolt Balogh, animator Marco Sandeman, and media wrangler James Long.

Rebel, rebel

"You gradually walk through the decades and changing personas of David Bowie surrounded by costumes, music, and video, and there is a sense of becoming more and more immersed in his world."

— John Hudson, *MuseumsandHeritage.com*

The designers allow Bowie's own singular personification of style to speak for itself against a cool, monochrome palette, reflecting his various artistic influences: Surrealism, Expressionism, Beat poetry, cabaret, Kabuki, and more. The juxtaposition of objects and media is sometimes quite

elaborate—as with the assembly of items and animations evoking the adolescent Bowie's bedroom/creative laboratory or the kaleidoscopically reflecting "Starman" video display showcasing Bowie's breakthrough 1972 turn on the BBC series *Top of the Pops*—and sometimes as simple as a mannequin dressed in a signature Bowie costume. One feels a sense of evolution more than chronology. Marsh says, "It's not a retrospective of his career. It's dipping into him as a creative force."

Mark Grimmer, director of 59 Productions, says, "The idea was to combine the curators' intellectual approach to Bowie as a cultural tastemaker with an aesthetic that was theatrical, informed by visual material that we knew to have been influential for Bowie. We wanted to make the exhibit feel like a weird dream, surreal. The geometry of the cases veers away from parallel. There are no right angles in the walk-through gallery—all the walls are slightly angled; nothing feels quite balanced." Touches of loud, pure "Ziggy Orange"—found in the dyed skin of the fruit or early Bowie's brightly dyed mullet hairdo—are one of the elements used to pull things together visually.

In a modern-day music exhibit with a significant audio-visual component, content creation and system design tend to happen together. "It's the only way to do it," Grimmer says. "Tech and creative are interwoven, and digital technology enables us to bring most editing capabilities on site. You design a system to give you the ability to



adapt quickly. This project was more like a theatre piece than a museum exhibit.”

“It would have been almost unthinkable to do this exhibition without pushing the boundaries of how audio/visual is generally used,” co-curator Broackes says in an interview published by *The New York Times*.

The use of headphones meant gallery spaces could be left fairly open without the need for acoustical barriers. The only theatre zone per se is the concert atrium in the second gallery. “We knew we wanted primarily a headphone experience,” Fry says. “But we also wanted to get close to the concert experience—the social, shared, visceral response where you hear it and feel it and feel others’ responses.” This set the stage for Sennheiser’s guidePORT and Auro 3-D systems. Sennheiser specialists Hilbich and Genereux helped customize and program guidePORT to supply the audio content segments tied to the displays, while Zielinsky created the special mix for the ten-minute Auro 3-D concert loop.

The amplified sound is not fully contained: Sometimes Bowie’s longtime producer Tony Visconti’s concert mashup bleeds in to the start of the exhibition. Ambient effects are triggered via QLab. To help visitors retain their focus, Fry devised a “Bowie tone,” using fragments of “Life on Mars” and “Space Oddity” to create a kind of custom white noise delivered through loudspeakers and through guidePORT, in some areas, masking any backwash.

The exhibition uses 550 guidePORT body packs with Sennheiser stereo headphones. GuidePORT is self-operational, responding to external triggers and zones set up in the environment. All the visitor does is put it on, switch it on, adjust the volume, and move through the exhibit. “It introduces a magical aspect in that it responds to where you are standing,” says Fry. “You wander around, and the system follows you. It lets you focus where you want to focus.”

In places, the “zones” are defined by audio loops, acting as triggers, which were laid into the floor by the exhibit’s hardware installer, Surrey-based Sysco Audio Visual Solutions. This proved a tricky process due to the amount of metal already in the floor and the building’s structure.

Two audio events are directly stored on the visitors’ body-pack receivers: A welcome text when entering the exhibition and an extro when leaving. All other music and video sound is transmitted as real-time lip-synch stereo audio from 11 twin cell transmitters. These rack-mount units are located in two control rooms that also accommodate two PCs used to extract statistical data from receivers.

“GuidePORT keeps adapting as designers bring us new programming ideas,” Hilbich says. “Designers’ imaginations and operators’ needs will continue to push it.” Core elements of a guidePORT system are the receiver, headphones, identifier, transmitter, charging unit, system software, statistics software, and announcement software. This exhibit uses one of the simpler forms of the receiver,



with just five buttons (volume up, volume down, stop, replay, and detail). The identifiers, used as triggering devices, are positioned near the exhibits but out of view of visitors. Visitors' receivers download the audio when they pass by the corresponding guidePORT antenna units and play the tracks triggered by the identifier.

Each identifier has a special ID code it transmits constantly. As soon as visitors enter the magnetic field of the identifier, guidePORT picks up the identifier code and triggers transmission of the appropriate recording. The range of the continuous signal can be flexibly set between 1' and 10' and can be extended by installing additional elements. A transmission zone can be any shape. "We scan the range and find a place for our links that doesn't conflict with the museum's in-house services," Genereux says.

Because the visitors are all listening through headsets, the galleries are quiet, even when filled to capacity, as each visitor is wrapped up in a personal multimedia experience. V&A director Martin Roth says, "It's not that different from a traditional art museum: You don't talk; it's contemplation, focusing on a piece, an object. It keeps visitors in their own capsules. The technology enables us to do what's important for a museum to do: to surprise

and convince your guest, your visitor, with new experiences and with more and different information."

Fry says, "We were lucky to have the Sennheiser connection. I wanted guidePORT, and I got guidePORT. It's not often you get exactly what you want!"

Sound and vision

"There's something completely pure and stripped-back about that last room despite the fact that you have costumes looming over you behind veiled screens."

– Susanna Lau, Style Bubble

"In the final room, you encounter the apotheosis of Bowie, the musician. On huge screens, five times life-sized, film of legendary performances plays, with the costumes glittering through the gauze. There's some new footage with Kemp, lost passages from The Diamond Dogs Tour, the famous D.A. Pennebaker film of Ziggy's final farewell. And, from three moments of his career, three versions of 'Heroes' you can listen to simultaneously. As you walk round the installation, the soundtrack in your ears changes."

– Sarah Crompton, The Telegraph

Fry says, "GuidePORT let us have the quiet, and Auro 3-D let us have the shared group experience." A recurring issue was how to present older recordings while making the most of modern tools and techniques. Bowie's career has spanned many advances in audio technology. Here, working from material originally recorded in mono, Zielinsky—a passionate perfectionist whose previous experience includes recording opera for Deutsche Gramophone—created an "upmix" using Sennheiser's proprietary Auro 3-D algorithm to simulate how the music would sound in a concert hall while maintaining the authenticity of Bowie's original performance and of sound recording in that era. The spatial sound mix plays on Sennheiser's new 9.1 Auro 3-D surround system, with footage of Bowie performing live on three scrim screens (30' high), and is also used for a custom song mashup created especially for the exhibition by Visconti. Acoustical drapes in the space brought the reverb in the space down to about one second.

Auro 3-D live recording utilizes specific microphone placement, delay, and speaker setup techniques. As of yet, only a limited library of such recordings exists, so additional content is created through upmixing. "Once you get used to nine-channel, there's no going back," says Zielinsky. "It's not easy, and it's not cheap, but it's a real revolution in audio quality that helps to bring it in line with today's video."

In regard to editing and coordinating the media with all the other elements, "Very little time was available for tech rehearsals," says Grimmer. "So we had to make changes in real time. With digital technology, you can now bring

most of the editing capability on site.” For this, the 59 Productions team used the Catalyst media server system. “We’ve been using it for about seven years. In the US, it is more often used for pixel mapping and in live TV and rock concerts for LED screens and lighting fixtures. We use it for video design in theatres and opera houses mainly. It has great flexibility and speed. It allows you to composite video files live and has useful exact mapping functionality. We have a good relationship with the software developer, Richard Bleasdale, who has customized it for us, responding to our requests for additional capabilities. It is relatively new to the museum and exhibition world, but this installation was more like a theatre piece. It is tied together with the other elements in the Bowie exhibition by the CueServer system from Interactive Technologies, Inc., which museums use frequently—mostly for global power up and power down. We are used to that kind of simplification in opera productions, where you do on-the-job training and, after opening night, hand things over to the in-house staff.” The Catalyst system delivers images to a lineup of projectors, including Panasonic PT-D 5000s, projectiondesign F32s, and Optoma EH2060s as well as Samsung UE55A LED wall displays, and a SyncMaster MD32B 32" LFD monitor.

Light oddity

Under contract to 59 Productions, dha design’s scope of work included all varieties of lighting: exhibits, objects, theatrical, and architectural. “We came on about a week before the designs were due to go out to tender,” says Grater. “The previous lighting designer had stepped down. Although fitting the project into our schedule was demanding, the actual logistics of the design were not such a big problem for us, as we have worked on many temporary shows at the V&A as well as lighting a lot of the permanent galleries and also recently the exterior. We know what to expect of the facility; we just had to come up to speed with 59 Productions’ requirements and the 3-D design, as laid out by Real Studios.”

Lighting came from in-house stores and outside rental. “The V&A has a large stock of equipment for temporary shows which, as budgets are invariably tight, all lighting designers are encouraged to use, although we did manage to buy some new low-voltage framing spots,” notes Grater. “The majority of the show lighting, along with the control system, had to be rented. Installation was by Reeds Electrical Services, with White Light providing additional cabling and control for the show area.

“All the object lighting had to conform to conservation guidelines—between 50 lux – 200 lux, depending on classification—and this, along with graphic and label lighting, comprises the main layer of light,” adds Grater. “The bulk of the object lighting is from tungsten AR111



track spots with on-board adjustable dimmers—there is a large quantity of these luminaires in the museum’s stock. The various lamp and lens combinations allowed us to be quite precise with beam control and throw as well as giving really good color rendering. For a show of this duration, the lamp life is comfortably in the predicted life, especially as they are all slightly dimmed.”

Where required, the aforementioned low-voltage framing spots supply a harder edge to the light and more precise beam control on graphics and mannequins. “Each of the display tableaux generally has a key light and some fill and sometimes a specific highlight onto the structure, such as the LED strip that wraps around the Space Oddity area, the backlight to the thrust graphics, and the ETC Source Four profiles that frame all the doors,” explains Grater. “There is a fair amount of color to complement the objects and the stage costumes, but it’s never overt.” Showcases are a mixture of LED and fiber optics.

Grater continues, “In the second gallery concert hall, or North Court, the dynamics of the 30-minute show are complemented by a more theatrical rig that is programmed and synchronized with the A/V content. We used a combination of PAR 64 and Source Four Zooms hung from the



box truss (at 30') for the mannequins. Within the 'Bowie Boxes' [16 cells containing Bowie-costumed mannequins that sit behind the main A/V scrim on the right-hand side] and behind the main gauze we key-light with vertical rows of birdies and have a variable color fill (plus zoom and strobe) from uplights using [CHAUVET Professional COLORado 2 Zoom Tours]. We also have some Pulsar LED strips for color ambience and a bare lamp in a cage on the back of each cell to give an interesting shadowed backlight effect. There are also a handful of egg strobes scattered about and a few more Chauvets here and there to light floor and wall surfaces. All the luminaires were individually controllable. 59 [Productions] were very specific about some cue sequences they wanted to achieve, and they had to be frame-accurate, so we programmed to time code. Jonathan Haynes, of White Light, was very helpful in this area. Once we had this structure in the desk, I augmented the looks with color and dynamics to suit the music, laying some manual cues on top of the playback.

"Considering the time constraints, it all went very smoothly," Grater says. "There was a good structure to the installation, very effectively managed by 59's [project manager James] Roxburgh. We pre-rigged once the trussing and tracks were in place and everything was hung and fleshed out, then we came back at the 11th

hour to focus and light. The install crew from Reeds was well-prepared and effective. Additionally, with 59's roots in the theatre, we had proper programming sessions scheduled, and despite some objects and graphics not going in until the last minute, it was all relatively calm. I think that the whole exhibition is nicely balanced—content, sound, A/V, and lights. The lighting does an effective job without showing off, although I did have fun with the various components in the Bowie Boxes, especially the bare lamps in the wire cages and the Chauvet [COLORado 2 Zoom Tours], which, for the money, are very versatile units."

"David Bowie Is" will exhibit at the Art Gallery of Ontario in Toronto from September 25 – November 27 and at the Museum of Image and Sound in Sao Paulo, Brazil in 2014. Sennheiser, 59 Productions, and other key members of the creative team will remain involved as the exhibit is reconfigured for its subsequent global stops. Not all of the V&A house gear will travel with it; the V&A will make recommendations to the hosting institutions. Grosvenor says the show will not travel indefinitely, mainly because of the fragility of the costumes. Those who aren't able to see the show may find consolation in the huge amount of related merchandise, including books, recordings, and clothing, with the central item being the exhibition catalog, the cover of which is, of course, Ziggy Orange. 📶