



The Bicentennial Experience: An Immersive Multi-Sensory Show



Creative Automation is the New Medium



Why Did Sydney Theatre Company Switch to CORE by DPA

Alex Scholeser Shares: It Will All be Software One Day

SINGAPORE

From Singapore to Singaporean: The Bicentennial Experience

Sound, light, visual, automation and effect technologies help bring the narration to life for visitors

This article is contributed by Ctrl Fre@k and Kenny Wong with additional input from ETA.



What is From Singapore to Singaporean: The Bicentennial Experience? Is it an exhibition, or a show, or a movie, or a museum, or a theme park? It is all of the above and at the same time none of them. This centrepiece event of Singapore's Bicentennial commemoration at Fort Canning Park is divided into two parts – a 'timed experience' inside the Fort Canning Centre, called Time Traveller and a 'free and easy' component at the top of Fort Canning Hill, called Pathfinder.

Time Traveller

The Time Traveller is an immersive multi-sensory experience which takes the visitor on a 700 journey through Singapore's history in 50 minutes. The Singapore Story is told through multimedia, sound, lighting, automation, water and other special effects, as well as, live performers.

Pathfinder

The Pathfinder is a thought-provoking series of pavilions which takes visitors through Singapore's place in the world across the centuries by using artefacts, maps, flora, the written word, augmented reality and interactive installations.

The show kicked off on 1st June with the run ending on 15th of September 2019.

Show Concept

The challenge for the creative team was how to create an experience about the history of Singapore that will be exciting and engaging to a wide spectrum of visitors – from pre-schoolers through to seniors. This meant translating the well-researched and comprehensive historical materials, provided by the Singapore Bicentennial Office (SBO), into a 50-minute journey that was more visceral than cerebral. So each Act offers the visitor a different sensory experience.

There are altogether five acts within Time Traveller. Visitors kick off the 'journey' at the Atrium before being encompassed with the different acts.

Show Control

In order to meet the projected visitor numbers, there needs to be 60 shows that can accommodate up to 60 visitors per show each day. This means that every 12 minutes a show needs to start resulting in



One of the Pavilions at Pathfinder

simultaneous runs in each Act. CtrlFre@k, designed a show control system which allows for the gallery guides in each Act to trigger the fully automated show with the push of a single button. The show control system is based on **ETC Paradigm** with integration of **ETC Eos**, **Green Hippo Hippotizer** and **Timax Soundhub**, which worked together as a seamless whole.

Video

In Act 2 and 3 the delivery of video content is done primarily with laser projectors. However, the ultimate deciding factor for the choice of projectors boiled down to the lens that can give maximum image height with the constraints of minimum ceiling height and lack of throw distance. The only lens that could deliver was the **Epson ELPLX01** ultra short throw ‘periscope’ lens. These were integrated into the Epson EB-L1100U (6000 lumens) and EB-L1405U (8000 lumens) laser projectors. As all overhead equipment on level 3 could not be hung from the ceiling, trusses were brought into place.

In Act 1, there was a particular requirement for the LED wall. It had to have the ability to function at a very low intensity without losing its colour integrity as it had to work in tandem with the projectors for the gauze, as well the lighting for the live actors that were layered to create the complete image. This was also required in Act 5 where visitors are in very close proximity to the LED wall. **Broadcast Professional** helped the creative and technical team achieve this with their partner **CLTED Display**, who tailored their product to suit the requirement.



The projection in Act 2



Close up of the projectors with the ultra short throw periscope lens. Photo@ETA



d&b speakers provided by Orbital. Photo@ETA

Audio

The confined spaces in the Fort Canning Centre called for many small speakers, which were not available for rent locally. So the technical team turned to **Orbital Sound** in UK who were able to provide the numerous and various **d&b loudspeakers** with accompanying power amplifiers. For Act 4, which is reminiscent of a bunker or air-raid shelter, there was a requirement for the loudspeakers to visually blend into the environment. For this the **JBL Control 60 series Pendant Speakers** was suspended out of view above the ‘bunker’.

The multi-channel audio content is mixed in-situ in each Act on **Pro Tools Ultimate**, which is then uploaded onto the **TiMax Soundhubs** to be played back. The audio content is then efficiently distributed to all the spaces via Audinate **Dante full redundant network system**

In Act 3 the visitors revolve around the 360 degree screen, courtesy of a revolving floor. Multi-channel Panspace tool within the Timax allows the technical team to synchronise the panning of the voice over, together with the movement of the revolve to ensure that the VO is always in ‘front’ of the audience member within the 12-speakers discrete channel 360 degree design.

Acoustics in Act 5 had an issue as well. This is due to the rectangular room which had reflective glasses protecting the LED screen from the water during the ‘rain’ effect. The technical team resolved it through a distributed surround sound system to achieve a more focused coverage – exciting the audience, not the ‘room’.



The lighting in Act 1 had to work in tandem with the projectors and LEDs so as to create a seamless experience for the audience

Lighting

The limited power supply in Fort Canning meant that LED lighting fixtures had to be used, due to their low power consumption. A myriad of fixtures were chosen to meet the varying needs of the show. The final inventory included fixtures from **ETC**, **Gantom**, **Chauvet**, **Martin Professional** and **GLP**, plus effects from **Rosco** and **GAM**. The smoke effect was provided via **Antari**.

At the outdoor *Pathfinder*, other than the use of LED strips, the other fixture extensively used are the different variants of **Gantom mini** fixtures, as well as **Martin Linear Graze**. The workhorse of the nightly sound and light shows are the five units of **Clay Paky Super Sharpy** and a unit of **Mythos 2**.

Lighting control is handled by **ETC Eos**. The lighting fixtures were supplied through **Stage Equip** and **Auxilio Studio**.

Automation

In Act 1 where 500 years worth of history had to be squeezed into 7 minutes, the creative team felt a need to propel the storytelling so that it is more dynamic. The solution was the use of a 19m long traveller which could be precisely controlled at specific moments to start, stop,

accelerate, decelerate and move at exact speed. A further dimension was added with two scenery tracks to move two physical flags across the span of the stage.

Due to the lack of space, Act 2 and Act 3 was combined into a single space. For the transition to happen from Act 2 to Act 3, two quarter-circular screen closes to form a complete 360 degree screen. Then in Act 3, the creative team wanted the visitor to feel like they are inside the 'machinery' of industrialisation. Hence they are seated on a revolving floor within the 360 degree screen.

Stage One from UK designed, supplied and installed all the automation elements. All of which were precisely controlled using their Qmotion automation control system.

Screens and Show Fabric

The entire Time Traveller uses quite a substantial amount of screens. **Showtex** from Hong Kong supplied all the gauzes, show fabric and different types of screen materials. They also fabricated the frame for the curved screens in Acts 2 and 3.



The water effect at The Atrium

Water Effects

The Time Traveller begins and ends with 'rain'. In the Atrium, to give the visitor a sense that they are going back in time, physical 'rain' is seen to happen in reverse. Extensive research pointed the creative team to a company called **Water Pearl** in Japan who eventually created this 'wow' installation.

The reversal of the water droplets was created using precision strobes and accurately timed water droplets that tricked the eye into believing that the droplets were indeed moving upwards. From the audience reaction during the shows there is no doubt that it was one of the main talking points.

Then to cap off the experience, indoor rain was created in Act 5, where visitors are given umbrellas to stay dry with. The intensity of the rain synchronises with the video content on the LED screen surrounding the



Act 5 where "rain" showers down at the guests. The top features tubes that carry the water. The flooring allows the water to flow through to a catchment underneath that recycles the water. The LED screens are protected from the water with a glass front.

visitors. Local water feature company **Agropolis** developed the system together with the Bicentennial technical team.

System Installation

All power and cabling infrastructure, plus all AVL equipment were installed by **Broadcast Professional**. They managed to complete the installation within a very tight-frame. They continue to be involved with the maintenance of the equipment.

** All photos for this article courtesy of Kingsmen unless otherwise stated*

KEY TEAM MEMBERS

Creative Directors: Beatrice Chia-Richmond and Michael Chiang

Technical Director: Kenny Wong

Multimedia Directors: Sally Lee and Brian Gothong Tan

Lead Multimedia Producer: Jx Huang

Technical Managers: Melvin Lee and Marc-Andre Therrien

Time Traveller Designers: MET Studio

Pathfinder Architect: Zach Collaboratives

Main Contractor, Project and Event Management: Kingsmen

Show Control, Video, Sound and Lighting Systems: Ctrl Fre@k

System Installation: Broadcast Professional