



A FINALE OF OLYMPIC PROPORTIONS

WITH THE OPENING CEREMONY EXTRAVAGANZA UNDENIABLY GETTING THE OLYMPICS OFF TO A FLYING START, THE CLOSING CELEBRATION NEEDED TO BE A SPECTACULAR CONCOCTION OF THE BEST OF BRITISH TO MAKE A LASTING IMPRESSION ON A GLOBAL AUDIENCE. TPI'S ZOE MUTTER SPOKE TO SENIOR PRODUCTION MANAGER, CHRIS VAUGHAN, TO FIND OUT HOW THE CREATIVE AND TECHNICAL GENIUSES BEHIND THE SHOW SUCCEEDED IN CREATING A FITTING END TO A PHENOMENAL RUN OF SPORTING ACTION.

Opposite: The Closing Ceremony team produced an event of visual and sonic splendour. Below: Senior Production Manager, Chris Vaughan.



How did you first become involved in the Closing Ceremony and in what ways did your background working as Production Manager for artists such as Take That and Muse help during the planning stages of the mammoth project?

I guess it's how most of us in this industry get our positions, being in the right place at the right time and knowing the people involved. I have been working with the Creative Director, Kim Gavin, since the early days of Take That - some 20 years now - and many of my other colleagues from that tour's creative team were also already working on the Closing of both the Olympics and the Paralympics.

I applied to Technical Director of all four ceremonies, Piers Shepperd - with whom I had toured when we were both very young - on the grounds that having worked with his creative team, and having the experience of moving and building very large shows in little time. And the resources of The Production Office, I thought would be a useful addition to his already very

heavyweight technical department.

Production managing stadium tours is a unique experience, and apart from being constantly rained on, is something that I very much enjoy. Being PM for both Muse and Take That, who have very conveniently scheduled the outdoor sectors of their tours on alternate years, has allowed me to build a team of people who, every year for the last seven, have been working in stadia and grown in knowledge and experience, which has allowed us to take on this greatest and most public challenge.

The combination of Kim's creative team, and endless possibilities presented by having so many British artists at his disposal, meant that we were always flirting with the danger of building a production which would be way too ambitious to be loaded into the Olympic Stadium in the very tight window between the end of the athletics on Saturday night and doors opening at 5pm on Sunday.

I often feel like I am refereeing a match

between artistic creativity, with its flair and ambition, and the mundanely practical realities of time, money and resources. The experience I have gained through years of touring at this level means that both sides of creative and management seem happy to accept my judgement of how far we should push our luck.

It's a difficult balance to get right. On one hand, if we were too cautious, the show would be compromised, it would feel safe and lack the edge that made it special. On the other hand, if we were too optimistic or reckless, we could end up with an embarrassment on a global scale.

One example that haunts me is Om the Robot on the Take That *Progress* tour, which with the benefit of hindsight and many sleepless nights I wish I had never agreed to taking on the road. It suffered some manner of technical failure on five out of the 35 shows on the tour.

For the Olympics Closing Ceremony these odds would be totally unacceptable as we

Below: Rehearsals for the Olympics extravaganza; The main design features of the event included Union Flag roadways and the London Eye as a centrepiece; Jessie J, Taio Cruz and Tinie Tempah were just a few of the musicians that performed on the night; DJ Fatboy Slim emerged from a giant inflatable octopus.



only had one chance to get it right. I could just see the headlines if we had got the balance wrong... 'Idiot who got Take That stuck on Robot strikes again'.

A key difference about this most recent experience though is that whereas rock 'n' roll production managers on large tours are often isolated, having to weigh up and take a great many risky decisions on their own, over the last eight months I was surrounded by a very talented technical team which Piers had pulled together to work across all ceremonies.

It was great to have the reassurance of working alongside Technical Manager, James Lee, who had a great deal of experience in ceremonies worldwide, and to be able to exchange thoughts and concerns.

Can you run through what the planning process for the ceremony entailed? How did the production team go about creating a quintessentially British event that celebrated the end of the most definitive 16 days of sport the UK has ever seen?

All the shows I work on with Kim, Es [Devlin], and Production Designer, Misty Buckley, are driven by the creative. Once the big idea is bedded in, then we set about finding the practical solutions. I believe that in order to produce something extraordinary, the priorities must be 'ideas first, practicalities next'.

By the time I joined, the concept of the 'Symphony of British Music' was already in place, along with the main design features of the Union Flag roadways, arching up in the centre to create a knot with the London Eye as a centrepiece surrounded by the iconic London landmarks.

Once decided upon the Symphony theme, the next step was to pick the artists whose performances would punctuate the storyline. Britain can unashamedly claim to be the world leader in pop culture and in this show we had a Damien Hurst floor cloth, leading fashion models and designers, performance acts Stomp and Spellbound, actors, and of course the music. Kim then assembled the show and weaved it into this, the moments of protocol which are of course critical to this event.

The Closing Ceremony is a celebration of the two weeks of sport, a party for the athletes and the official handover to Rio De Janeiro who are hosting the next Olympics. It presents the medals to the winners of the Men's Marathon and acknowledges the hard work of the volunteers.

How long did you prepare for the event and how many people were involved in the process?

I joined Piers's team in November, firstly on a part-time basis and then full-time from February. It was probably May by the time I stopped

feeling like the new boy at school, some people had already been there for several years! Each department is headed up by a Production Manager / Head of Department who would manage the suppliers and their staff, which if you include the cast, involves in the region of 6,500 people.

The main difference between the Opening and Closing Ceremonies - apart from the obvious scale - is that whereas the Opening is built and rehearsed in the stadium, Closing must load in overnight. In order to give myself the best possible chance of ensuring that this happened on schedule, I brought with me a team of 22 who have been with me for the last few years. This meant whilst the Opening Ceremony was at the Stadium, we were out in Dagenham on the site of the old Fords Factory, preparing the equipment and practicing putting it up and taking it down.

Using music to communicate a strong sense of Great Britain's vibrant history and culture was crucial for the Closing Ceremony. How did the event organisers and creative team go about choosing the line-up and which tracks would feature in the production?

It wasn't the easiest job for Kim to build such an important show, on the shifting sands of artists' availability. Whilst the choice of artists was of course important, the Symphony was

Below: Artistic Director, Kim Gavin; Staging Designer, Es Devlin; Lighting Designer, Patrick Woodroffe; Technical Executive, Piers Shepperd.



about the choice of music and the songs which punctuated the story.

Looking back on the extraordinary success of the Olympics, you would have thought that every British artist alive would be knocking at our door, wishing to take part in the event. In reality - like putting together any bill - it was a juggle.

Many of the artists approached immediately said yes and came to the party with amazing good will, patience and enthusiasm. However, some of the acts which we would have liked to be in the show were unavailable, some fell prey to the scepticism about the Olympics that seemed to grip the nation ahead of the games, and some simply didn't want to take part.

The Olympic Park site is very different to your standard live event location. What challenges did it present and how were these overcome by the production team?

Firstly, the Olympic Stadium is a beautiful brand new venue built specially for these Games. There are always going to be difficulties in the overlap of the tail end of a major and extremely security conscious construction project and the early stages of a production install.

This was true of both the Millennium Stadium in Cardiff, which I inaugurated with Manic Street Preachers, and of Wembley where we followed George Michael in with Muse. Anyone who had to access the stadium whilst it was still a construction site, will have seen

their life ebb away in a series of inductions, accreditation changes and beurocratic hi-vizzery.

Secondly, it's a sad reality that the Olympic Stadium was and is a target for terrorists and needs protecting with strict security regime. There is no way round this and we needed to work with them.

Every person, vehicle and piece of equipment entering the site needed to be security checked and each vehicle arrival time booked in advance. This took an enormous amount of preparation. The speed at which we had to move our equipment into the Stadium meant that we brought the trucks onto the park 24 hours in advance so as not to risk having any of the



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Below: Some of the talented performers hard at work before the Closing Ceremony; Rehearsal of the section when giant jigsaw pieces were moved into place to form the face of legend John Lennon; The event was a celebration of the world's greatest athletes.



CONTRIBUTORS

AUDIO - Delta Sound, Norwest Productions, Autograph, Britannia Row, DiGiCo, L-Acoustics, Sennheiser, Shure, Dolby Live

VIDEO - Creative Technology for Stadium, PRG Nocturne for the Main Stage, Treatment Studios, Crystal Digital, Tait Technologies, Avolites, Immersive, Panasonic

LIGHTING - PRG (V676, Best Boy, Bad Boy), GLP, Martin Professional, Clay Paky, Philips Vari-Lite / ELP Syncrolite

PYRO - Kimbolton, Pyrojunkies

POWER - Power Logistics, Aggreko

STAGING - Stageco, Total Solutions Group, Brilliant Stages, Artem, Stage One Creative Services, Fineline, Cardiff Theatrical

PRODUCTION RIGGING - Unusual Rigging Ltd

AUTOMATION / WINCHES - Stage One

BUSSING - Phoenix

TRUCKING - Transam / EST

SECURITY - The Armed Forces

trucks not being in position to tip at the time we needed them to.

It's of enormous credit to the Ceremonies Operations team who had to bridge the gap between the needs of the production and the very necessary security requirements of the Olympic Park that none of the trucks experienced difficulties in getting through and that our load-in ran to schedule.

What we now have is an incredible new stadium in East London. It has five access vomitoriums through which you can drive trucks, an enormous pitch capacity and a very intimate feel. I really hope it becomes a regular venue on the touring circuit.

How did you go about organising the process of loading in everything needed for the event after the last of the games had taken place in preparation for the ceremony. How quick was this turnaround?

Between Mo Farah being presented with his gold medal for the 5,000m and the gates opening for the Closing Ceremony there were 18 hours, which - allowing for necessary technical checks and a run through of some of the elements - left us with 15 hours to load in and set up 100 trucks worth of equipment.

The preparations were identical to how you would prepare for a tour. As each production element was developed we considered 'how can we make this quicker and where are the

risks?'. In this area, the team of carpenters we put together, led by Mark Berryman and Rick Worsfold, excelled.

We set up a workshop in Dagenham, where we did our production rehearsals and as each bit of scenery would arrive it would be taken apart and assembled many times and wheels were put on everything. As always, we opted for large lumps which would be manoeuvred with forklifts rather than cranes, which are very time consuming.

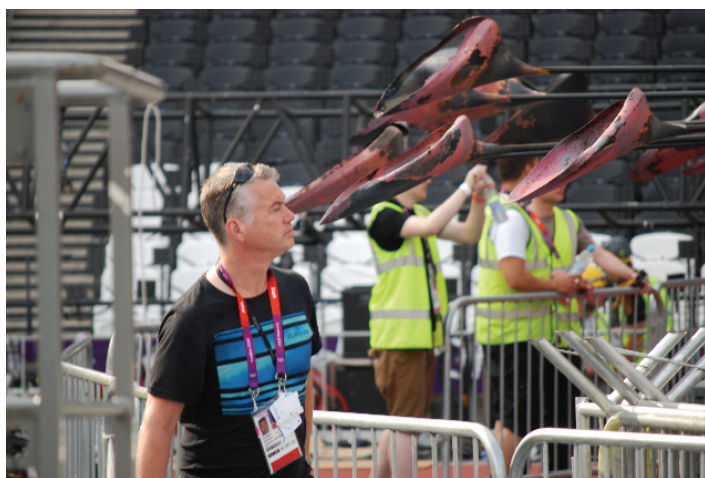
The minute that the stadium authorities gave us the go ahead, we were covering the athletics track with Geotec [a synthetic carpet which allows you to drive forks on it]. We had rolls of this distributed strategically the day before.

What qualities did the suppliers chosen for the event need to possess? Can you list the key suppliers and why they were selected?

The decision for stadium based suppliers was made by Piers before I joined, as they were to remain in place for all four ceremonies. With regards the choices for the elements for the Closing Ceremony alone, the primary consideration was whether they understood the challenge presented by the load-in schedule. In this respect, we opted for suppliers with backgrounds in the touring music industry.

The Main Stage was a scaffolding structure with a second layer of 18mm ply printed with the newspaper print. This element was given

Below: A total of 86 cars, 12 Transam trucks, 50 Vespas and 10 mopeds were incorporated into the production; Patrick Woodroffe's extensive experience of lighting stadium shows was evident for all to see on the night; Artistic Director, Kim Gavin, inspects load-in; Rehearsals in full swing.



to Stageco, whom did not flinch at the idea of building the 2,200 sq metres of scaffolding and double skinning the ramps in the 10 hours we had.

Our other two main suppliers were Brilliant Stages - who built the knot items, Tower Bridge / Battersea and RAH - and Total Fabrications, who excelled in delivering high quality on time with the main music stage, St Pauls / The Gherkin and Big Ben, from which Timothy Spool appeared at the top of the show.

The props for the Closing Ceremony - all 18 truck loads of them - were managed by Dan Shipton, who was also with us on the last Take That tour.

The manufacture of these was spread across Fineline (John Lennon Head), Cardiff Theatricals (Pyramid of Boxes), All Effects and the gallant efforts of the in-house props workshop across the road in Marshgate, where volunteers helped to assemble and paint some of the 5,000 props involved in this show.

The other significant feature of the Closing Ceremony was the 86 cars, 12 Trasam trucks, 50 Vespas, 10 mopeds, bicycles, taxis, a bus which turned into an octopus and four tipper trucks, which gave us the video screens for the Freddie Mercury projection. All of these were choreographed and rehearsed by Paul English, Stage Manager for Muse. This was a very major project all on its own, driven again by volunteer drivers, apart from the truck drivers.

What impressed you most in the ceremony, from a production perspective? Is there a particular piece of equipment or technology that particularly stood out?

It was great to have a flying grid over a stadium, I wish that more stadia did. It would eliminate the need for ugly delay towers and, as we look at the aerial shots, the stadium looks so clean. The pixels had the wow factor, but the stars had to be the volunteer performers and crew and the people who managed the process of finding, administering and keeping them enthused.

The volunteers had nothing to be gained apart from the desire to participate. Coming from a sometimes cynical and profit driven industry, it was a great thing to witness the enthusiasm of people who just wanted to be part of what we were putting together.

The pixel boxes that were controlled by Avolites Media / Immersive Ai Infinity Servers and featured LEDs created by Tait Technologies attached to every seat of the 80,000-capacity arena were used to great effect in the Opening and Closing Ceremonies. What were the initial discussions surrounding the visual impact the show needed to make and how did the team go about achieving this?

It was a perfect medium for us, as pop culture and massive visual screen content go hand in hand. The fact that it was installed for the Opening and left in for us gave our creative team

KEY CREW

Artistic Director - Kim Gavin
Technical Executive - Piers Shepperd
Operations Executive - Mik Auckland
Staging Designer - Es Devlin
Technical Manager / Aerial & Special Projects - James Lee
Senior Production Manager - Chris Vaughan
Technical Design & Staging Manager - Jeremy Lloyd
Senior Administrator Technical - Andrew Morgan
Production Manager Scenic - Dave Williams
Stage Manager (load-in / out) - Mark Berryman
Stage Manager (Rock 'n' Roll Stage) - Mike Grove
Head Set Carpenter - Rick Worsfold
Production Manager Props - Dan Shipton
Production Coordinators - Emma Nielson and Zoe Buttlng
Senior PM Audio & Coms - Chris Ekers
Audio Designer - Bobby Aitken
FOH Sound Engineer - Gary Bradshaw
Monitor Engineer - Steve Watson
Lighting Designer - Patrick Woodroffe
Production Manager Vehicles - Paul English
Technical Manager Cauldron and Services - Scott Buchanan
Technical Manager Scenic and Props - Ted Irwin
Technical Manager Lighting, Video and Power - Nick Jones

Below: The Union Flag roadways arched up in the centre to create a knot with the London Eye structure; Pixel boxes attached to every seat of the arena were used to great effect in both the Opening Ceremony and Closing Ceremony.



an incredible opportunity. I was delighted not to have another six truck loads of gear to be loaded in as it was left in across the Olympics.

Sam Pattinson and his team from Treatment Studios as ever did a great job in producing content which dazzled and was relevant to the song and complemented the lighting.

Effective illumination is a key part of any large-scale event and with Patrick Woodroffe on board as Lighting Designer, the ceremony was in capable hands. Why was Woodroffe the obvious choice for the role and what were the key considerations for the lighting aspect of the production?

Effective illumination is a good choice of words, in that there were four ceremonies to cover. Patrick has more experience in lighting stadium shows than anyone. The Opening Ceremony had the advantage of carrying out its production rehearsals in the stadium, but as with all other ceremonies, because so many of the cast were volunteers, these rehearsals would be carried out during the day and rely on overnight programing sessions.

In addition to his own individual vision and talent, Patrick brings with him a team who allow for the creative process to carry on day and night to maximise the hours of darkness for programing. For the Closing we made a scale groundcloth to replica the centre stage and ramps and meticulous story-boarding of the show allowed Patrick to plan the lighting cues in advance. They only had a few overnight sessions available for us, between August 3 and 10, during which time we needed to programme this complex show. Watching it back on TV a few days after the event, I thought the results were amazing.

With music being the central theme running throughout the whole show, audio quality was undoubtedly of great importance. What equipment at FOH, monitor world and in the PA configuration made this possible?

We used two DiGiCo SD7's in all control positions - FOH, monitors and broadcast - and all signal paths both in and out had a digital main

with an analogue backup. This was achieved by using Optocore, Dolby Lake Processors and a fully redundant analogue multicore. All PA was L-Acoustics with 220 V-DOSC, 55 Arcs, 88 KUDO and 88 SB18 subs. All monitoring was done using Sennheiser G3 IEMs and microphones were a mixture of Shure and Sennheiser.

Because of the very limited time and with 31 music artists to get ready for, we set up a studio at 3 Mills for all artists to come and address the audio issues, as we knew that at best, we would have one dress rehearsal at Dagenham and the chance to run their song once only as part of a stagger through on the day. This proved very successful as when the artists and their engineers arrived on site for the dress rehearsal most of the audio issues had been resolved and the bands all felt that they were amongst friends.

What factors came into play when tailoring the event for the audience in the stadium as well as those watching the show at home?

It was important that the show ran like a gig and the feedback from the live audience was critical in keeping the energy levels of the show up. Kim is the master at crafting shows which flow naturally and the Closing Ceremony was very much a show designed for the public which was televised, rather than the other way round. It had to be, as again there was no time to rehearse this for any more than a few hours in the stadium before the public came in.

We had some very difficult technical transitions to make and I am enormously proud that we did not have to deploy any of the emergency VTs on our account. Although during our rehearsal in the afternoon it looked like we may have to put an episode of *Eastenders* in to cover the striking of the London landmarks, on the night it ran very smoothly.

At the rock 'n' roll stage end, we had Mike Grove stage managing the many bands appearing.

The Closing Ceremony is of a far grander scale than anything most industry professionals have encountered. What valuable experience has it

provided you with that you will take on to future shows?

Despite the size and complexity of this show, it still felt manageable, and I went into the load-in feeling relaxed about the outcome. I am not the most technically able Production Manager, but can hold my nerve, believing that If you have a plan of action and a great team of people to execute it, there is no need to panic. It will turn out all right...probably.

The Olympics has taken much of our resources this year, although we kicked off the year by looking after Coldplay's promotional shows, and whilst myself and Zoe Buttlng have been working on the Closing Ceremony, Keely Myers and Paddy Hocken have been looking after Biffy Clyro and Cher Lloyd. Paddy is currently working on the Paralympics Closing Ceremony which having seen what Misty Buckley has come up with, I cant wait to see. I'm going to be one of the volunteers, helping with their load-in.

With a global audience of millions glued to their screens watching the concert in addition to the crowd in the stadium, this was a once in a lifetime opportunity. What was your highlight from an unforgettable evening?

Unfortunately I didn't get to watch any of the athletics until the last day. Having come into the stadium well ahead of time, waiting for the stadium to be handed over to us to start the load-in, I was able to go up to the control booth, where I watched Mo Farah win the 5000m. This was a magical moment.

As Mo stepped onto the victory podium and our crew was waiting in the vomitoriums with pitch protection ready and scaffold stillages sitting on the forks ready to roll in, I thought 'they may say it's not about the winning, it's the taking part, but in 14 hours we have to start a show run through and this is not a race you would ever want to lose'. Some of the assembled cast of supermodels weren't too bad either...

TPI

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