

LIGHT ENTERTAINMENT

Words Veronica Simpson

Every medium has its moment... and a collision between digital programming, light and A/V technology is adding an immersive new tool to the designer's palette



It's a cumulative thing – the sensation that we as civilians get when a phenomenon we've noticed cropping up here and there suddenly appears to have pervaded the mainstream. The point really hit home that something clever and interesting and affecting was happening with light and audio-visual technology across every aspect of culture when I sat in the O2 Arena on London's Greenwich Peninsula watching alt-J's eerie psych-rock translated into the most dazzling, digitally empowered, visual display.

While the four blokes in the band remained pinned in place by one steady white beam, a sensuous choreography of light elements swarmed, flickered stroboscopically or quietly pulsed across the stage and occasionally swept out across the audience in waves. The music was the main event, but the light show came a close second. The whole experience was like receiving a powerful visual and sonic massage drenched in the essence of alt-J.

The realisation suddenly crystallised, looking back on some of the major cultural landmarks I've enjoyed over the past few years – from exhibitions through dance or theatre shows to massive public events – that there has been a quantum leap in the skills and sensibility as well as the technology and the increasingly collaborative approach used in lighting, A/V and sound design. These elements, which used to play a supplementary role to any performance or event, have moved centre stage.

'I'd like to call it a light show but it's really so much more than that. The stage has become the fourth member of the band,' said Fin Greenall of Fink. That was way back in 2011, when Fink had decided to bring on board theatre projection and light specialist 59 Productions to add a little immersive magic to the band's show and make the gigs for their then-biggest tour to date 'less spit and sawdusty'. It clearly worked, as 59's team was brought back on board for the band's much bigger world tour 2014-15.

Many of the studios leading the field of immersive A/V and lighting design come from a live-music, VJ or theatre background. The music scene in particular has been driving innovation. Bands now make very little money from their recorded output, so they have to rely on live gigs to draw crowds and cash. Which means their gigs have to be far more distinctive and immersive.

But just one year after creating Fink's first live show, 59 Productions had taken on a far bigger challenge: to weave a spectacular live audio-visual element into the 2012 London Olympics. Working alongside artistic director Danny Boyle, the team was in charge of all design, animation and film production services as well as programming and technical design of A/V elements. This included providing content for four giant LED screens mounted on the stadium roof, all projection in the show, content projection mapped on to the inflatable house during the 'party' sequence, and the 'audience pixels', a stadium-wide



1 (previous page) – Soundfield is a sound reactive video installation commissioned by Wired magazine from The Light Surgeons. It was part of Bentley Motors Night Call 2014 event in the wind tunnels at Farnborough Airport, in an event celebrating British design and ingenuity

2 (opposite page, top) – Designer Moritz Waldemeyer created these costumes embedded with 140 LED lights for the London 2012 Olympic closing ceremony, featuring dancers from Brazil, hosts for the next Olympics

3 (opposite page, below) – Desh was an extraordinary, semi-autobiographical dance performance created by dancer Akram Khan, who interacted with live animation. Visuals are from Crouching Tiger, Hidden Dragon designer Tim Yip and lighting designer Michael Hulls

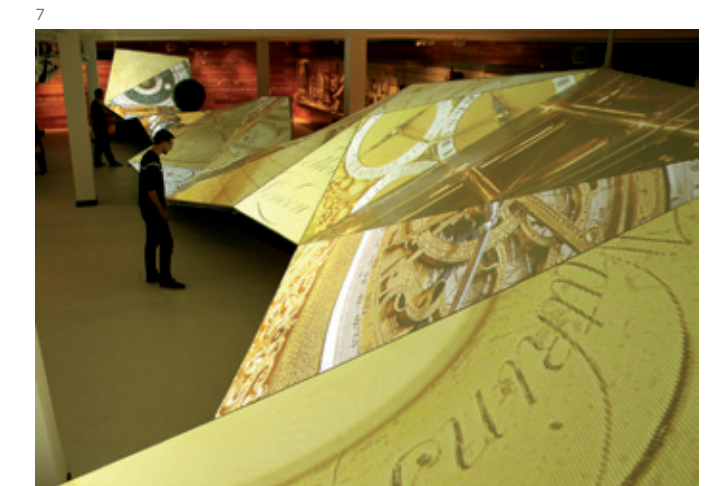


surface of custom-built, 9-pixel, LED panels mounted between every one of the 70,000 seats. A vast video-display device, these panels were used to turn the entire stadium into one huge interactive screen, displaying images, synchronised light patterns and spelling out those deeply memorable words that symbolised this austerity-era extravaganza: 'This is for everyone'. And with a fraction of the budget, the London 2012 opening ceremony pretty much eclipsed the icy choreographic perfection and pyrotechnic mastery of Beijing 2008. Who needs fireworks when you can do so much more with the 21st-century equivalent?

From this period – 2011 to 2012 – onwards, layers of lighting and audio-visual wizardry started cropping up in a pivotal role in almost every kind of performance genre and cultural event. In contemporary dance – always a genre that embraced the stark and emotive power of lighting – a key moment occurred with Akram Khan's *Desh*. Thanks to the vision dreamed up by Crouching Tiger designer Tim Yip working with lighting designer Michael Hulls, Khan was able to interact with fish, trees, rivers and elephants conjured up seemingly on the spot by a rolling illustrated animation behind him. Hofesh Shechter's visceral live music and dance piece followed hot on its heels: *Survivor* (2012), was a collaboration with sculptor Antony Gormley, whose structures and massive video projections enhanced the primal power of the performance immeasurably. Innovative use of video mapping has been cropping up at the National Theatre, in shows

like *The Curious Incident of the Dog in the Night-Time*, which opened in 2012 and is still running, in part thanks to the genius of the NT's lighting designer Paule Constable, whose minimalist, projected set shifts seamlessly from the stark contours of the main characters' imagination to the real world. And with another NT hit, 2014's *Great Britain* (A/V design by 59 Productions), the moveable set walls became as critical a presence as the actors, regularly transforming into front pages whose headlines meshed, with split-second timing, with the revelations and one-liners popping out of the actors' mouths.

In a parallel trend, the superstars of the formerly estoteric and obscure world of light art, such as Olafur Eliasson, are becoming household names. Thanks to his seminal Tate Modern turbine hall installation, *The Weather Project* (2003-4), light artists are coming to be regarded as purveyors of extraordinary experiences. The genre is reaping additional interest and momentum from coding and LED technology, stoked by major exhibitions from the Hayward's *Light Show* (2013), to the Barbican's *Digital Revolution* (2014). Lately the Barbican's *Curve* gallery has become a natural home for innovative interactive installations, including UVA's mesmerising *Momentum* (2014). But even everyday exhibition experiences have suddenly started incorporating layers of A/V sophistication and digital interactivity, from the V&A's 2013 blockbuster *David Bowie Is* (59 Productions, again, with exhibition designer Real Studios) to the Maritime



4 & 5 (opposite page) – United Visual Artists (UVA) created *Momentum* for the Barbican's *Curve* gallery in 2014. It gave visitors an atmospheric experience of light and motion through the dynamic interplay between a robotic programme and a series of lasers on pendulums

6 – Audio visual artists The Light Surgeons' live cinema project, *SuperEverything*, was commissioned by the British Council in Malaysia. An exploration of identity, ritual and place, it combined observational documentary footage, motion graphics, creative programming and live orchestral music, and went on to tour extensively

7 – The Light Surgeons were commissioned by exhibition design practice Real Studios to create a rich audio-visual tapestry of images and words to play over a structure at the entrance to the National Maritime Museum's introductory exhibition, which opened in 2013



Museum's grand reopening in the same year, which featured not one but two immersive A/V installations (from 59 Productions and The Light Surgeons).

There is, of course, a sequence of technological and cultural shifts behind this sudden percolation of screens and A/V wizardry into every nook and cranny of public and cultural life. Christopher Thomas Allen, director of audio-visual artist group The Light Surgeons, traces it back a decade and a half to Apple bringing out its Final Cut Pro (FCP) desktop video-editing software, which coincided with video cameras being fitted with Firewire, enabling would-be filmmakers and VJs to download directly from camera to computer. Says Allen: 'Prior to that, editing video was inaccessible for most small companies. That's when it all changed and when video became the vocabulary. Now all of that is on your phone.'

But things became really interesting, says Allen, when digital programming joined the party. He says: 'There have always been people who could write and do programming but it was always associated with big systems and corporations and administrative stuff. Then gradually a series of software patents came out that enabled people to build and create apps, and now there's a whole range of them. Another core element is, over the past 20 years, the internet has promoted the idea of sharing and open source that is driving a lot of this innovation.'

Allen is not a programmer, but he works with them to

develop projects – immersive and interactive cinema, installations and experiences are his thing. 'Now the skills to define and create your own tools are much more in the hands of the producers,' he says. 'And that's been driven by this need for interaction from audiences. It's no longer enough in our world for people to just see well-crafted, beautifully made linear media... though I still think there's a good argument for that work.'

One of Allen's concerns – and it's shared by several of the studios interviewed here – is that these new textures and effects should be used judiciously. 'Sometimes you can do something more affecting with a room full of candles and someone singing,' says Allen. 'There's too much work that starts off on the premise of the technology and not the content.' Projection or video mapping, for example, may have reached saturation point. Says Allen: 'The architecture world finds it fascinating. Suddenly buildings become these canvases for content. It embodies all these ideas that kick around in architecture about meaning and people and place and suddenly you can see it on the walls. But ultimately it ends up being CGI rubbish – blocks falling down or lights travelling around a building. It's just fireworks. It's son et lumiere. People love it. But as an artist, it's a cul-de-sac. And you can't show it again once you've run it. So it's a very un-cost effective way to make work.'

There are some subtle and fascinating artists and studios working with architectural lighting but just as interesting are the



8 (previous page) – Lighting the Sails was a unique projected artwork commissioned from 59 Productions for the summer 2014 VIVID Live festival, animating the sails of the Sydney Opera House with a narrative that evoked the design, construction, spirit and imagined destruction of this iconic building. It played every night for two weeks

9, 10, 11, 12 – 59 Productions was asked by Historic Royal Palaces to create a unique celebration for the launch of Hampton Court Palace's 500th anniversary. Its 22-minute projected artwork told the architectural and cultural history of the palace and played for three nights over the Easter 2015 weekend, with original music commissioned from Paul Clark, and culminating in a spectacular three-minute firework finale

13 (opposite page) – Designer Moritz Waldemeyer collaborated with hat designer Philip Treacy to create some stunning enveloping headpieces for his return to London Fashion Week, in autumn 2012. An intricate mesh of threads are soaked in resin then woven with 6,000 LED lights, programmed with animated sequences



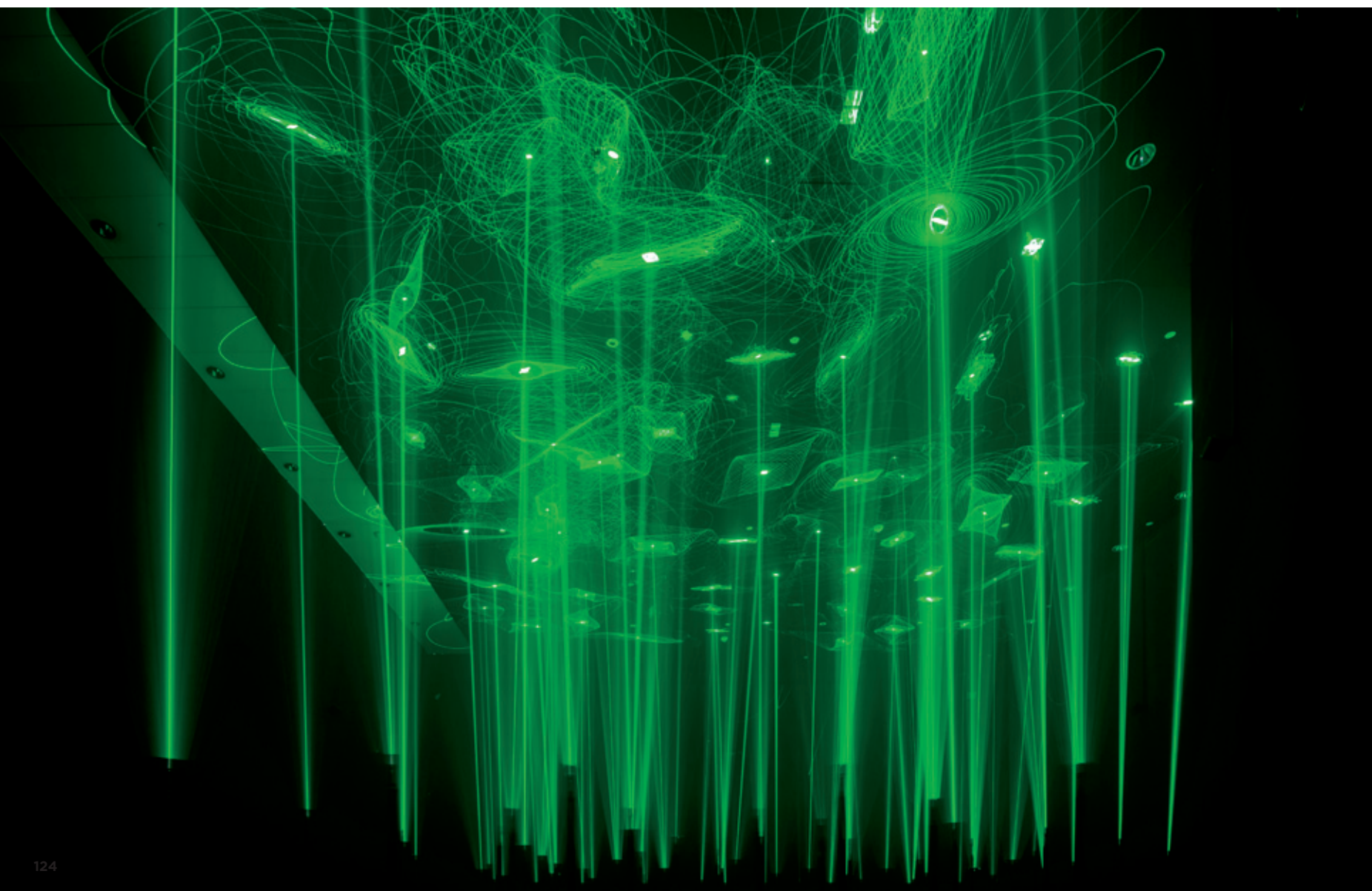


studios – such as Light Collective – that are tearing up the rule book and making playing with buildings and light a far more interactive and collective experience; its Guerilla Lighting projects, for example, bring real communities an opportunity to revisualise and reframe the landmarks in their environment through carting some powerful lights around for a night and throwing the spotlight on unusual or neglected spaces.

One of the exciting aspects of this new medium is the way in which the leading studios can spread their skills across a wide range of projects and evolve. 59 Productions is now building on the narrative skills and experience it has amassed over the past decade to produce entire theatrical events. And UVA, for many years one of the leading exponents in the field, is moving away from performance and into the rarified atmosphere of light art. There's much more that can be done with the medium than flashy superficial pyrotechnics, says UVA creative director Matt Clark: 'You have this medium that's immaterial but it can completely change the way you feel about a space. It can convey a story. It's the activation of space using these technologies that has become an interesting area. No longer do we have to experience something in a passive way. That's an exciting potential. The problem with the technology is... it can be seductive to the point where that seduction overshadows what it is you're trying to do with it. There's nothing wrong with experimenting with new technology to see what happens. But you get to the stage where

you ask yourself: what's the point in this? In more recent years, we've been putting the idea at the front of the process and trying to get to the core of the idea. The technology is there to help you express that idea. It depends what your space is, who your audience are. Ultimately, unless our work is about how technology and humans get along [we're not interested]. We don't want people to think of the technology when they walk into a space. We want them to forget – even when it's a highly technological piece. That's maybe where how we use technology has evolved. It's becoming more seamless.'

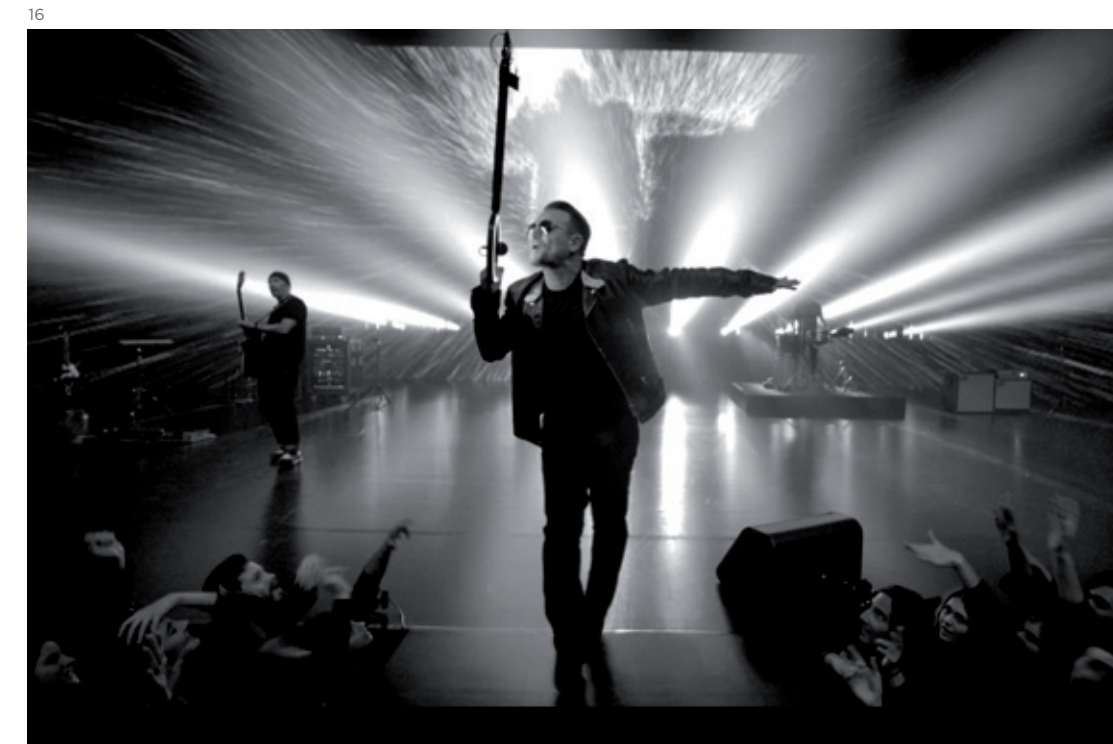
But where there is a cutting-edge design movement or technology, you can bet the corporates have been sniffing around looking to see how they can exploit its kudos to cast a superficial glamour over their own clunky products. To be fair, there are brands that have given generously of their time and funding, and without which a lot of the more-exciting developments would not have been possible. But it's one thing to have a lighting manufacturer (Concord) support designers in showing how creatively its technology can be deployed. It's less obvious where the credibility is when car makers come knocking. Some use it well, others less so. Audi, for example, has given light artist/designer Moritz Waldemeyer free rein to bring his dazzling inventions to Audi's promotional bandwagon, whether it's creating spiky, alien light sculptures to illuminate models at car shows or creating bespoke, LED-enhanced costumes for



14 (opposite page, top) – Light Collective showcased the work of German design outfit WHITEvoid (Circular, foreground) and UK studio Haberdashery (Disco Disco, in background) for a spring 2015 Paris show Play of Brilliants, celebrating the work of some of the leading light and A/V artists

15 (opposite page, below) – Marshmallow Laser Feast's interactive, musical laser installation Forest is composed of musical 'trees' made of steel rods and lasers that visitors can physically tap, shake and pluck. It was commissioned by the Barbican for the Bloomberg-sponsored Digital Revolution exhibition in 2014

16 – Marshmallow Laser Feast created an extraordinary audio-visual banquet as a backdrop for U2's latest Punk tour



choreographed promotions. But it does seem as if no design event can now escape having some big chunk of gleaming motorised metal sitting on a podium being animated by LED pyrotechnics.

And, having recently returned from the World Expo 2015 in Milan, it's clear that this technology has gone mainstream: a huge number of the nations represented there decided to harness as much interactive, A/V wow factor as possible in the services of promoting their own landscapes or cultures, or just in creating really 'cool' arty atmospheres. But there was very little in the way of content or thinking behind them (the UK pavilion excepted).

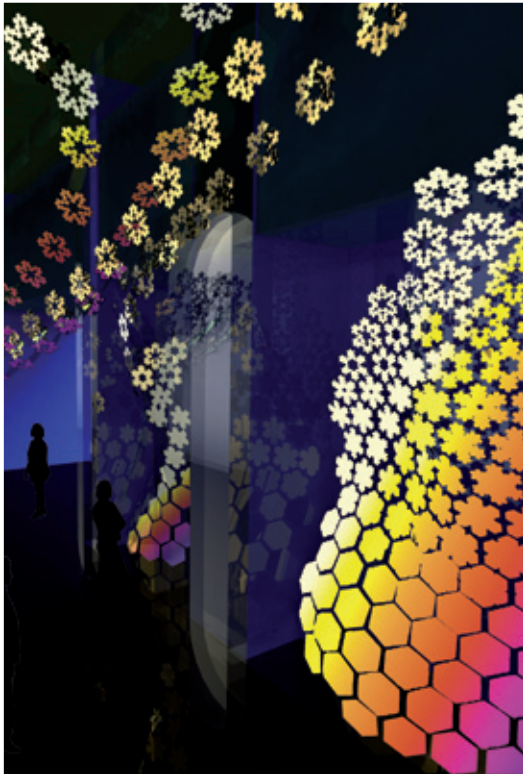
So what next? Does a growing ubiquity of these tools and techniques mean that the medium's allure will fizzle out any time soon? Waldemeyer thinks not. 'I'm open-minded and interested in all sorts of opportunities,' he says. Having worked with Will-i-am, Rihanna, Philip Treacy and even Take That, those with big money (stars and global firms) can still offer opportunities and budgets that push innovation. Says Waldemeyer: 'Audi is one of my favourite clients. We've done things for Intercontinental, for Paul and Shark, Rinascente, Jaguar. Every time it's different.' If the tools he's using start becoming too mainstream, he says, 'We'll just have to push ourselves. Ideas are bouncing around. It's not that we come up with everything. There's always a cross-pollination. It's just a question of continuing to be curious and pick up on things and have a play and hopefully something new comes along.'

One of the inevitable trajectories for this technology is virtual

reality (VR). Marshmallow Laser Feast is leading the field here. One of its creative directors, Barney Steel, traces his enthusiasm back to a lecture by The Light Surgeons' Chris Allen while he was at college: 'They totally inspired me. He was breaking up content over multiple screens and had multiple projectors on at once. That sparked a natural curiosity to create experiences that break the format of the rectangle and fill the space. It's like an itch we keep scratching.'

So far MLF has 'scratched' that 'itch' by collaborating with a weird and wonderful array of designers, mathematicians, robotics engineers and techies to make extraordinary immersive work for a whole host of clients. These range from Royal Opera House choreographer Alexander Whitley (for a piece where the dancers were interacting with shifting spaces created by multiple laser beams) to Saatchi & Saatchi, for which MLF created a Drone Light Show for its New Directors Showcase in 2012 (15 'quadcopter' drones being choreographed through a large, clear pyramid filled with moving smoke and light, with an interactive light beam display). VR is where it's at right now, says Steel. 'We're interested in breaking that barrier between the stage and the audience.' The technology now can 'give you such a sense of presence. It's not just a medium for storytelling. It opens the doors to an experience more in line with reality... but not constrained by the laws of physics,' says Steel. 'This is a really exciting time now – we can barely keep up with what's possible.' ■

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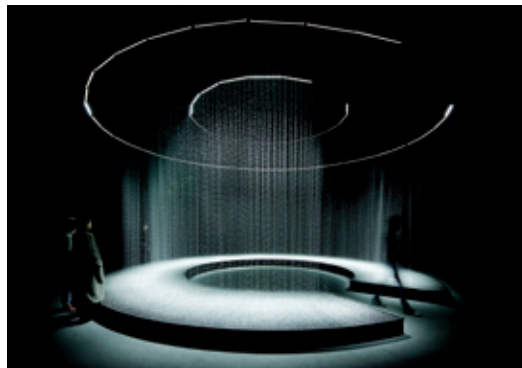
17 - Milan's Rinascente department store was given a high-tech blast of fairy lights over Christmas 2013, with Moritz Waldemeyer's projected artwork. A network of 1,300 coloured snowflakes made from laser-cut plastic, and coated with film that reflects multiple chromatic effects, was draped over curved and painted iron pipes and animated by projectors so that the flakes appeared to come alive and sweep through the store's entrance portico

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18 - Marshmallow Laser Feast worked with Royal Opera House choreographer Alexander Whitley to create The Measures Taken, a piece which premiered in 2014, allowing cutting-edge, motion-tracking technology to project visuals that interact with the performers' movements in real time

19



19 - Light artist group DGT created this Light in Water installation for 2015's Paris exhibition Play of Brilliants, curated by Light Collective, to showcase some of the leading creatives working with light