





# HELLO HELLO

## WELCOME TO A PLACE CALLED VERTIGO

Part socio-political crusade, part reclamation of musical innocence, part showcase of dazzling new live production technology... U2's latest mega-tour captures the band at its emotional peak. Prior to the Vertigo//2006 tour steamrolling into Australia & NZ in March, Mark Cunningham & photographer Diana Scrimgeour travelled with the entourage through California to bring you this extraordinary story of show design excellence...

There's something a little different about the mood of the latest U2 tour production, and it feels like a natural culmination of the iconoclastic excess that has accompanied the Irish foursome over previous campaigns.

Averaging 22 songs a night, the set is punctuated by a series of mission statements that dovetail neatly with such humanitarian rallying cries as the new 'Love And Peace Or Else' and the classic 'Pride (In The Name Of Love)'. Virtually all of the new

album's tracks made it into the pool of around 40 songs from which the band will draw. Echoes of U2's early days are felt with 'An Cat Dubh', 'The Ocean', 'Gloria', 'The Electric Co.' and the show closer, '40', and many of the band's classic anthems and torch songs find their way into each performance on a semi-rotational basis, thus keeping it fresh every night for the band and audience.

### **SIMILAR STRUCTURE, REVOLUTIONARY CONTENT**

Having no previous indications of how the Vertigo staging would look, it was an exciting moment when I walked into the empty arena in San Diego to catch my first glimpse. I was actually taken aback by what first appeared to be something not a million miles away from the Elevation concept — a main stage, in front of which was a heart-shaped walkway, with both areas divided by a mosh pit or exclusive club environment for lucky fans.



This time, the walkway is an elliptical shape with some very clever LED integration, and although the decoration of the stage area is different, the basic idea — including four I-Mag video screens above the stage — has been retained. Production Manager Jake Berry commented: "People have asked why it looks the same. But wasn't Elevation one of the most perfect tours ever? It provided both a huge spectacle and an opportunity for fans to get very close to the band, by way of the center pit. I equate it to being like the manager of a soccer club. If you're winning, don't change your manager, and this was a winning formula, so don't change the basic design."

Frankly, although I understood Berry's practicality, I was shocked by this remark as it flies in the face of U2's career-long mission of constant reinvention. In tandem with their recorded output, Zoo TV, PopMart and Elevation represented huge leaps in terms of their live presentation. By contrast, Vertigo appears to be a short hop.

I asked Willie Williams, U2's lighting guru since 1982 and now their overall show designer, to comment on this observation. He said: "It's a fair statement, but it's interesting how some functional elements of a show are never questioned. We had exactly the same backline last time. We had the same PA last time, and yet no one's saying, 'gosh, how dull, it's repetition, have they run out of ideas?'"

"We really questioned whether we should do something completely different, or whether we should use that format again. But, in the end, the only reason to not do it would be because we did it last time. And to put them in a less successful performance situation, for no good reason, just seemed churlish. Another major factor which prompted those decisions, was the fact that we are actually playing in many of the same buildings."

The same approach has governed one aspect of the video design. "The notion of having a video director switching live video as an adjunct to live performance is something I hate because you always end up dividing the attention and getting competing elements in a show. Last time we absolutely cracked it and I've done it with other people since. This is just a great way of dealing with letting the people at the back see what's going on, without it being a competing design element."

"This time, we are using the top



screen for other things than I-Mag. We've made it one long piece, rather than four separate screens, so we can use it as one screen. For me, those things are no more aesthetic design elements than microphones or a PA — they just facilitate U2's performance. And so I focused on other things, rather than just trying to have a new-shaped stage, just for the sake of it.

"The great thing for me is that we're lulling people into a false sense of security. They think they know what to expect when they walk in but the stuff that comes out of this box is very different to what came out of the Elevation box. I was determined that we would go elsewhere, in terms of the spirit of the show."

"There's no fat in this show at all, there's hardly room to breathe — any notion of an acoustic section went out the window some time ago. I was always determined that this wouldn't be as cuddly a show as the big, giddy love fest that Elevation was, because it's a different world now."

## BIRTH OF THE MISHERE

Certainly since Zoo TV, U2's tours have always been instantly identifiable by at least one visual milestone. Bono's MacPhisto alter-ego and the presence of a myriad of video cubes and flying Trabants were among Zoo's content; PopMart swaggered with its mirrorball Lemon, record-breaking LED wall and towering yellow arch, and then came Elevation's heart and embracing of stunning PIGI projections. Vertigo will forever be remembered for another huge step — a series of 'digital video curtain' roll drops, each containing long strings of tennis ball-sized, plastic-encased, Saco LED spherical modules called MiSpheres.

Designed and manufactured by Barco and Innovative Designs (formerly System Technologies and now a Barco-

owned business), the MiSphere is a direct descendant of the MiPix modular LED 'tile', only this technology allows a video image to be viewed from any angle — providing an astonishing 3D effect for audiences seated behind the stage.

Above the stage hang a total of 189 strings divided across seven roll drops that are retracted and lowered at various points throughout the show. Four of the MiSphere screens fly in across the diagonals of the 360° show, and the other three form a line across center stage, behind the drum riser.

Each string contains 64 spheres and measures nine meters long — the total MiSphere count is over 12,000. Impressively, Barco took just six months from initial design to final delivery of the MiSphere strings, which says a lot for the company's commitment to advancing technology when it's most needed.

Williams explained how the concept evolved: "At some point in the early design process in August 2004, Mark Fisher and I were comparing notes, and we realized we'd been independently thinking about video pixels on strings. Originally, what we wanted to do was fill the space above the stage with a three-dimensional grid of LED pixels, where panels would be arranged next to each other, spaced as far apart as the balls are from each other."

"We imagined that they'd be almost invisible filaments with tiny little LED pixels on them, and so we made a half-sized mock-up in Belgium last October using MiPix. We could only view it at 180° from one side but we certainly got the sense of what something like this would look like. It was one of those days where everyone was saying, 'wow, this is amazing'. The idea, of course, was that you would literally have 3D video running in this 'video cloud'."



"Unfortunately, I just wasn't seeing what I hoped for — I realized that it only looked three-dimensional, like a rather intense two-dimensional sphere and I shuddered at the thought that we were about to dump a ton of cash on a hugely expensive way of making something which would actually look two-dimensional."

Furrowed brows and scratched foreheads persisted until Frederic Opsomer of Innovative Designs was asked to rebuild the concept as one large curtain, following a conversation between Fisher, Williams, Richard Hartman and video director Stefaan 'Smasher' Desmedt on the return journey from the Belgium prototype viewing. Adrian Mudd, the video animator at Mark Fisher Studio, made extensive and detailed animations of video sequences running on the MiSphere curtains, and the next design phase began.

"The overall effect had much more dimensionality to it than the 'cloud'," said Williams.

"And, of course, it addresses some vital issues. The band are effectively playing to a 360° audience because there's seating behind the stage, and so you can't have anything that blocks sight lines, which is always a huge factor in the design.

"Whereas most video screens aren't terribly interesting from the back, this is astounding because this is video that works from the back and can be seen through. It's a huge video surface that just comes out of nowhere, and then rolls up again, and just goes into a truck, and takes no time to deploy. Compared to something like the PopMart screen, this has been pretty healthy out of the gate."

#### MOVING ART

One only has to glance at the credits listing in the back of the tour brochure to realise how many 'cooks' have been responsible for the visual material seen during the show. Among them is video artist and F.O.B. (friend of band) Catherine Owens who is again working with Williams, contributing her Declaration of Human Rights sequence. The High End Systems DL1 is also used in its projector form during this piece in which a face is seen eerily within a mid-air cloud of fog — an idea influenced by Tony Oursler's Influence machine.

The video background for 'Sometimes You Can't Make It On Your Own' is a central MiSphere curtain drop displaying an aimless walking man figure, designed by Julian Opie, a high profile artist who had previously designed a Blur album cover



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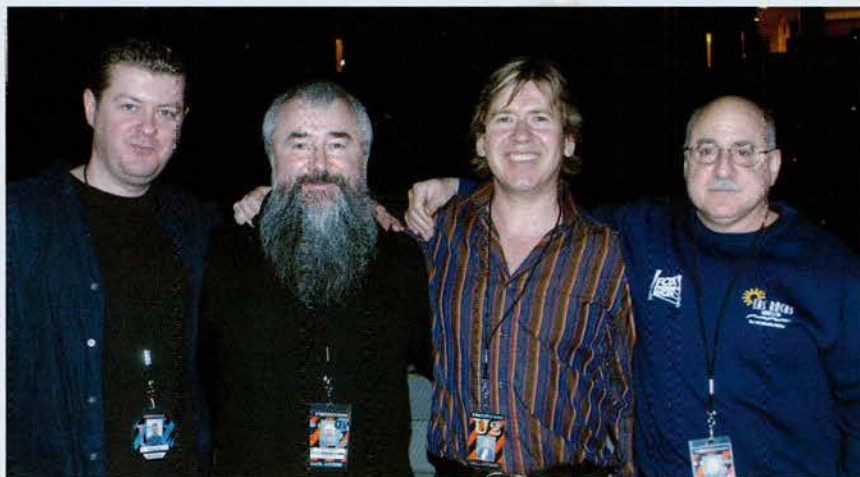
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Carl Glanville, studio engineer. Joe O'Herlihy, Steve Lillywhite and Jo Ravitch.

amongst his other considerable achievements. Williams commented: "I was interested in using the visuals as a kind of a rhythmic device, and Julian's piece is a very good example of a simple, minimalist portrait."

## SECRET WEAPON

At front of house, on a crowded riser behind Joe O'Herlihy's audio control, the lighting and video directors and technicians are gathered together like bees around a hive. It's one step closer to a goal that Williams is inches away from achieving: "Rather than having separate video and lighting crews, I've been trying to pioneer a uniform visuals team because, to me, it's just nuts to have one set of guys plugging in moving lights next to another set of guys who are plugging in DL1s. Vendor practicalities meant that we weren't able to take the leap completely this time, but that's the way of the future."

Visuals producer Sam Patterson was in an identical role when he worked with Williams on the creation of visual material for the Rolling Stones' Licks tour. He was in charge of the curse strings as the various artists were commissioned to create pieces for Vertigo, and as Williams observed, much of that material ended up being made on site during rehearsals. "The key element was discovering United Visual Artists, and that because of the nature of the MiSpheres and all the LED on the stage, we required a completely custom control system," he said.

## BIG BROTHER SURVEILLANCE

One fascinating idea that has found its way into the show involves covert surveillance of the audience, resulting in a surprising video 'gag'. The High End DL1 fixture, part of the Catalyst system, has an on-board infra-red video camera

in its moving and six of these fixtures are scattered around the arena, concentrating on different areas of the audience.

The basis of the surveillance idea came out of a conversation between Fisher and Williams while they were "trapped together" during 'We Will Rock You' rehearsals in Las Vegas.

Williams commented: "U2 have always been about their audience. But the absolute rule with any of the video directors I've ever worked with is you do not shoot the audience. As soon as you do, they will inevitably start waving and yelling 'Hello Mum'. However, if you collect the images for later use, they have no control. They see themselves on the screen but it's too late — it's already been recorded. Capturing little snippets of video of people, when they're completely off guard, is really beautiful."

"Ash had written this program where he can take a live video image and pixelate it, but each pixel can be a different video input. I can take an image of Bono and gradually break it up, zooming in until we see that it is composed of moving images of the audience members. I've recently started shooting surveillance footage of the band during the show as well, which has a very interesting quality."

## EXPLAIN ALL THESE CONTROLS...

XL Video's UK and Belgium offices supplied the wealth of video equipment for the tour, with the MiSpheres rental handled by Guido Ruysschaert in Brussels and the remaining cameras, projectors and control coming from Hertfordshire.

In order to provide a central control platform that would handle this huge pool of computer-generated imagery and other artistic footage prepared for

the tour, as well as the live camera images, XL supplied the Barco Folsom Encore show control system (Folsom was acquired by Barco last year) along with the cameras and screens.

The Barco Folsom Encore provides source selection, advanced windowing features, seamless switching, video effects and integrated control. Its modular, scaleable architecture allows the system to support a wide variety of show configurations and efficiently support anything from one to 32 screens with any combination of independent display or seamless wide-screen display elements. In short, an ideal system for this tour.

## LIGHTING

The first hint of any lighting on this show occurs without any form of control at front of house, when the four U2 members emerge to stroll around the Ellipse, waving flashlights into the audience, before assuming battle positions. Then it all kicks in...

Where lighting is concerned, Bruce Ramus has occupied the role of Williams' right-hand man, programmer and lighting director for many years. Since *Elevation*, the High End/Flying Pig Wholehog III has been developed and Ramus is pleased to be able to use it as the main lighting controller for the first time with U2. Ramus said: "We needed a lot more universes for this tour. Last time, I ran a Hog 1000, which only has two universes, and Willie ran an Avolites Pearl. He didn't really want to program or be committed to running anything this tour, and I had more lights than a Hog II could deal with - so as I'd worked on a Hog III all last year on 'We Will Rock You', I decided to go with that."

"They've done a lot of work on the software and I'm running a Beta version of their latest build, after all, U2 tours tend to be full of prototypes so I thought I'd join the crowd! On this version of software they've really sorted out a lot of the network problems that they had earlier on. Before, there was quite a weak link between the processors and the console but it seems much more stable now. I'm really pleased with the performance."

Although Ramus is taking the reins of the lighting direction and at the Wholehog III, the situation is also set up for Williams to informally interject at any moment and run cues as he sees fit. To facilitate this, he has a Hog wing at his disposal as well as a Playstation-type joy stick device — together they allow him to govern the integration of the lights



and video. Said Ramus: "He's got a lot fun toys, and if he wants to do the cue for 'Where The Streets Have No Name' or hit the blinders in 'The Fly' then he can. Obviously we both know what's coming up and I might just flash him a look that says, 'do you want to take this one?'. We did the R.E.M. Up tour like that and it's really fun to have that ability because it just mixes it up for us."

Another familiar face on the tour is John Lobel of lighting supplier PRG, who can count himself among the small executive club of veteran U2 vendors. He said with a smile: "On the night of the first show, Roy Clair, Michael Tait and I were all standing upstage right, and Paul McGuinness came over to say hello. We realized that the three of us had been supplying equipment to U2 for a combined 70 years — and I was the new guy who'd only been doing it for 18 years!"

Was there much time for programming? "A decent amount," said Ramus. "I put in about four days pre-programming with the ESP Vision system at PRG's shop in Las Vegas, the company's primary touring location these days. It's an enormous place in contrast to Newbury Park where we prepped the last tour. I then constructed the rest of the job during production rehearsals, and a lot of the time has been spent putting together the video system so I was waiting for the rest of it to catch up."

It's the third U2 tour for Aussie crew chief Garry Chamberlain, taking over from Kes Thornley who is again out with the band. Lobel commented: "Kes is so over-qualified, for the stuff that he does on this tour, that it's one of the things that makes this crew so good."

## FIXTURE CHOICE

For Vertigo, a significant amount of the Vari\*Lite presence on the last tour has given way to Martin Professional products — namely MAC 2000 wash lights augmenting VARI\*LITE VL3000s. PRG purchased a large amount of new equipment — mostly spotlights — specifically for this tour.

Lobel commented: "They've hardly ever used hard-edged lights in U2 shows, it's not their kind of thing. The only hard-edges on Elevation, for instance, were the PIGI projectors — everything else was a wash light or an effect light. Aside from these and the Martin 2Ks, the biggest pure lighting looks are created by the 67 four-way molefays. Over the years, we've had a lot of different configurations of audience lighting. For Joshua Tree and Zoo we had nine-lites and some 12-lite units. On Elevation, we used linear four-way lights, now we're using two-by-two four-ways."

The lighting rig is marginally larger, but Ramus observed that the big difference is that the current choice of fixtures has a notable increase in channels. "We have something like 75 moving lights and a big bunch of DWEs as always, plus a lot of Atomics."

Thirty-seven Martin Atomic strobes contribute to one of Ramus' favorite looks in the show. "They perform fantastically on 'Vertigo'. They're working great with the color scrollers and we bumped that number up during rehearsals by getting a dozen more of them. I've found a way to basically confuse the Atomics, where I tell them to do two separate things at once and they go off on this beautiful random pattern."

"I did something similar on Elevation with Diversitronics D3000s. It looks programmed but it's not, and it's not in the manual! I basically tell the strobe to come on randomly but to ramp up with full intensity, and then I tell the fader to be at zero intensity. Consequently, they just get all confused and do these things where there is no facility to program them unless you do it wrong."

Although Lobel is thoroughly impressed with the new

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show, one could detect a little disappointment that the majority of the technical risk and experimentation with this tour has rested with the video department. When one considers the challenges that Lobel has risen to before, especially for Zoo TV and Elevation, for which he personally devised some outrageous, one-off lighting effects, it's not surprising he feels as if video is stealing some of his thunder.

"The great thing was that this allowed us to really concentrate on just doing a really well prepared and presented lighting system, and I'm really proud of the way it came out," said Lobel. "I think it's a remarkably efficient deployment — for the amount of stuff it really doesn't take a lot of time to set it up. Part of that is due to an idea that Jake had for Elevation. While they're building the grid we build all the trusses out in the arena, and pre-hang all the lights, pre-cable them on some wheel brackets, and then we roll it in.

"It only takes about 40 minutes of lighting clogging up the floor space, to put up a fairly large lighting system. We've got about four trucks of lights, including about one truck of grid, but that's a remarkably little amount of time to slow down production, for a system that size. And Jake deserves the credit for that one!"

There are three levels of trussing involving five different moving trusses, with two diagonals that are separate. Ramus said: "We have 30 moving points on this for things like the factory lights and the roll drop frames, and we're using Vario-lifts for all of those. We've got a couple of 18kW HMI Fresnels on this show — one of them is

suspended with a dark blue gel on it, it's bright enough to fill the entire stage, and it just comes in with an appropriate look for one of the early '80s songs.

"The other 18kW lives under the stage and it works like a shuttering lighthouse effect in 'Love And Peace' when Bono and Larry are doing their thing together at the front of the stage. Underneath the stage it's a very low-tech, medieval-looking contraption with a big propeller and a guillotine blade that opens and closes."

Perhaps the most profound lighting effect of the show occurs when Bono asks the crowd to get out their mobile phones; the crew turn the lights off and as if the night sky fills with stars. "It's the 21st century Woodstock," said Williams. "The sight of 18,000 cell phone screens surrounding the stage is an effect money couldn't buy."

## EMBRACING DIGITAL SOUND

One of the biggest diversions from the U2 touring template has been audio director Joe O'Herlihy's move from his long-time choice of the Midas XL4 analog console, to the DiGiCo D5 Live digital board — a highly significant decision, given O'Herlihy's previous, almost religious, belief in the analog medium. This move was announced informally in September 2004 at PLASA during Total Production's Designing For U2 seminar. "I was quite shocked by the reaction to the bluntness of my announcement," said O'Herlihy, U2's FOH mix engineer since 1978. "With any new format or technology that becomes available, it's wise to wait until everybody else has driven it on a few tours here and there.

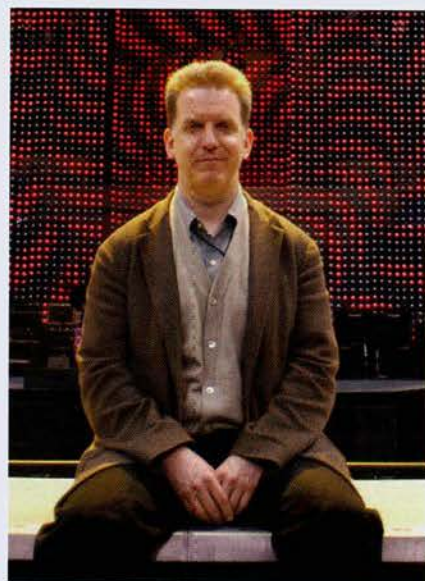
"The D5 has now travelled across the world, it's been bounced up and down, it's been in and out of trucks and planes and boats... and it still ends up doing its thing. That's why I've chosen the D5."

His interest in the D5 was sparked by a number of conversations with his contemporaries who had expressed great satisfaction in the console. He was particularly taken by the D5's snapshot facility. "It's quite exceptional," he said. "As we've progressed through rehearsals in Dublin, Mexico and Vancouver, the band have chopped and changed all the time, so being able to swap and generate new snapshots along with the evolving set list configuration has been vital. The access to the songs is immediate.

"The preparation that's gone into this tour, rehearsal-wise, is huge. I'd estimate that 99% of what I do now involves the preparation. So it's fantastic to have a console like the D5 that gives you that whole access to functionality, and basically lets you do what you do best: mix the show. You don't have to worry about missing cues, because in the context of the song it's all confined in the snapshot.

"Programmed cross-fades, fader moves and rides have in the past been synonymous with the studio domain, but it's now equally available and relevant to live sound reinforcement domain, and it's a wonderful thing."

To a certain extent, O'Herlihy, like many D5 users, is relying on the console's internal effects processing. "I use the six available aux sends for drum treatments and a couple of acoustic guitar and piano parts; I certainly use the various different reverbs that are on board. But for all of the vocal treatments



Lighting designer Willie Williams.





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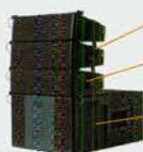
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and everything associated with the dynamic value of the vocals between Bono and Edge, I use external treatments and effects. Those decisions are based on both the sonic value of those particular items and an element of familiarity.

## CLAIR SYSTEM

For the second time, U2 are touring with Clair Brothers' JBL-loaded i-4/i-4B line array system, processed by the Clair iO wireless system control that was co-designed with Lake Technologies. Powered by Clair-modified Crest 9004, QSC 9.0 and Carver 2.0 amps, this system required some adjustments at San Diego Sports Arena, because of the venue's low ceiling and O'Herlihy wasn't best pleased with the poor acoustics of the arena either.

"It's not doing me any favors!," he laughed. "Where we did production rehearsals in Vancouver, the arena is a full-on 20,000 capacity facility with the proper trim height. So you get the full value of your system from a distribution perspective, and you get the aesthetic value of it locking in with the rest of the production. Fortunately, once we leave San Diego we'll mostly be playing venues that compliment the sound design."

Flown on a custom 360° indoor hanging system, the PA is divided into a main left and right front system, a left/right side fill system and rear fill, with 12 Showco Prism ground sub-basses. "On this particular occasion we've come up with a very interesting way of distributing the rear fill," commented O'Herlihy. "We've got, left and right, two clusters of eight P4s per cluster. We have an up tilt and a down tilt, which basically gives us incredible distribution and dispersion so it's extremely even across 180°. There's no cross-referencing, no hotspots, and when you walk the length of the back of the bleacher section behind the stage it's very transparent. It's all down to a clever usage of rigging, and it's helped hugely because you need something that's going to throw immediately rather than require distance for it to be functioning at its best."

The central pit — variously described as Club Atomic or the Bomb Shelter — benefits from Clair FF2 front fill speakers which are attached to the entire stage perimeter and are also attached to the ellipse perimeter. This results in a club-style atmosphere where the sound has a close, intimate feel in contrast to the general arena ambience.

Although it's a similar system to

Elevation, O'Herlihy pointed out that things had in fact moved on. "The general placement of loudspeakers and the rear fill are all completely different because of updated technology. Also, the front fill and all of the stage perimeter and the ellipse perimeter equipment has all been specifically designed for this tour."

## SUBTERRANEAN MONITORS

Dave Skaff shares monitor engineering duties with Niall Slevin and Robbie Adams, all of whom have enjoyed a long and fruitful association with U2. For many years, the band's monitor world has been a 'subterranean' environment below stage left, with a walkway that allows reliable communication between the band and crew. In here, mixes are divided between three consoles — Skaff's ATI Paragon II, another D5 Live shared by Slevin and Adams, and a Yamaha O2R which generates communications mixes for the stage crew.

On the eve of the second San Diego show, pulses raced as the Paragon broke down, forcing some quick thinking on the part of Skaff who rescued the situation with a Yamaha PM4000. "We carry an old PM4000 for the band to use with a couple of wedges in a backstage rehearsal room for when they occasionally might want to work out parts in private," he said. "We hadn't set that up just yet, so the console was just idle and it provided a quick solution."

It was to Skaff's credit that the band were able to function on stage, with the minimum of background fuss, but it also helped that U2 are sensible professionals who share an understanding of what is going on around them, technically. "The hardest part was attempting to cross-patch everything," said Skaff. "There were a lot of things that had to just get triaged; there were no effects and the on-stage sound for that show was pretty dry, but workable. The band were really professional about it and they just needed to know how to work around the shortcomings. They were part of the same team dealing with the same problem, not someone standing over you demanding that things are just right."

"They place an enormous amount of faith in us guys and trust our judgement. When Adam walked in he just said, 'you seem to know how to get around this, just carry on', and Larry really liked the sound of his toms, so it was a kind of relief!"

Skaff came on board for this tour after his former monitoring partner, Brent Carpenter, left the team. It's interesting

that his choice of ATI — which has since made a full recovery — mirrors O'Herlihy's preference at the time of Zoo TV.

"I chose the Paragon II firstly because I know it back to front, but also we're not doing things much differently," said Skaff. "The ATI has got an incredible amount of outputs and routing options, and we use pretty much every bit of it. I didn't use a digital console for several reasons, one of them being that I send mixes out to several other mixers on stage, and things then come back to me, so latency was an issue."

Several years ago, Larry Mullen Jr. expressed concern that because monitor world was going beneath the stage, the crew might not react quickly enough to an immediate band requirement. This led Skaff to design a system whereby he can send click tracks and other audio information to Sam O'Sullivan — Mullen Jr.'s drum technician and backline crew chief — via a set of ATI 8MX2 mic pre-amp mixers. This allows O'Sullivan to make instant adjustments whenever the drummer gives a signal.

Skaff: "It evolved through working in the studio. I send stereo pairs of the drums, keyboards, guitars, vocals and a bunch of separate click tracks of percussion loops. So they're all available there for him, but they all come back to me as the final arbiter of the mix. We do something similar for Terry Lawless [the programmer who contributes keyboards from beneath the stage].

"And there's another situation, I think, with Terry where we do something like that as well. If I was using digital consoles for that calculated conversion time, it would put me way out of time for a click track, or just enough to get us in trouble. So, rather than even go there, I've mixed this band on an analog console for years."

Robbie Adams' main task is to record every show using the combination of a DiGiCo D5 Live and a Pyramix digital multitracking system. Joe O'Herlihy explains: "It's like an iTunes snapshot of a particular week. Robbie is a studio engineer who worked on Achtung Baby and a few other records with us down through the years. His role during the day is to track everything that we've recorded, listen back and select stuff for the band so that they can decide which songs are strong enough to offer as downloads. The Pyramix technology is another advantage of the D5 and, again, another selling factor when it came to choosing the console."

Whereas Adams and Niall Slevin look



after the personal mixes for Bono and Edge, Skaff concentrates on Larry Mullen Jr., Adam Clayton, Terry Lawless and the so-called '911' emergency back-up mixes. Skaff is using an astonishing 38 of the 40 mixes available to him on the Peragon II.

One notable progression in U2's monitor world is that Adam Clayton has finally conceded to using in-ear monitoring. Skaff commented: "Adam's really giving it a shot this time and he's doing OK. Our issue at the moment seems to be with click tracks, how much is musical and that kind of stuff. We're doing what we can to make those click tracks musical and enjoyable to play to."

The IEM systems in use are a Sennheiser combination of new G2 series and older 3000 series transmitter/receivers. "After some A/B comparison, the vocals and guitars seem to sound better with the older units, and the newer units seem to have a much cleaner, punchier sound for the bass guitar," said Skaff. "Larry is also on a new G2 system when he's wandering around the stage and he has a hardwired one when he's sitting at the drum kit."

Future Sonics Ear Monitors are worn by Bono, Clayton and Mullen Jr., although Edge has been experimenting with some unidentified consumer ear pieces given to him by producer Steve Lillywhite who, like Brian Eno, Flood and Daniel Lanois on previous tours, has been travelling with the band to offer his own advice on approaches to replicating studio sounds in the live domain.

Skaff adds, "But Marty Garcia from Future Sonics, who has worked with us for some time, has been out on the tour and after discussion with us, he's come up with some new custom ear pieces that we hope might offer a better solution for Edge for the length of the tour." [I tried these out myself on my iPod and I immediately noticed an incredibly smooth bass response.]

Despite the in-ear activity, wedges are still in evidence but the stage count is considerably smaller these days. On a previous stadium tour, the band used around 65 wedges. For Vertigo, there are two Clair 12AMII wedges for Bono, two 212AMs for Edge, one 12AMII by the piano, two ML18 subs for Mullen Jr., and a 212AM, a P4 and two ML18s for Clayton.

So the on-stage sound is a lot quieter then? "A lot quieter, yeah," replied Skaff. "The wedges are basically there for some localized low end support, and what you mostly hear onstage is coming from the house. A lot of that house stuff coming back in the microphones is very usable and it's become a big part of the mix I'm doing for Larry and Adam. I'm just mixing slightly into or behind the guitar levels coming back from the room. The drum kit overheads are very hot, it's very open and I only have gates on the kick drum. Sam does a great job with Larry's kit and it's sounding excellent."

The simple approach governs Skaff's choice of outboard processing. "It's my standard collection of M5000, SPX990, 480L and TC 1128s. I figured if I was mixing analog I'd stay with the whole analog world."

## TO THE WORLD...

What did Jake Berry have to say about the rumors that Vertigo may be running through to the end of 2006? "From a production standpoint, U2 could tour for as long as they wanted right now and even for the next year," he said. "Whether they choose to do it is another point but they would sell out everywhere effortlessly, such is the demand. I'm sure the majority of the production staff wouldn't mind that to help pay the mortgage!"

Text & interviews by Mark Cunningham

Photography © Diana Scrimgeour

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