

The magazine of the
Institute of Sound and
Communications Engineers

Summer 2016

ISCE



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Comments on articles and letters are invited.

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Introduction from our President

Phil Price *MinstSCE*



Welcome to our Summer 2016 edition of our online magazine. The first six months have certainly gone quickly.

We have some interesting features from some of our Supporting Members on

PA/VA solutions in this edition for you to read.

Of course, only very recently the importance of a clear and intelligible PA system was demonstrated in the incident at Old Trafford. Voice alarm PA systems are becoming increasingly significant to many of our members' work.

It is good to see in Andy Scott's *Standards Update* that the WG23 Committee of EN54-24 are now discussing and planning the tests for larger (pro audio quality) loudspeakers plus the possibilities to bring active speaker systems into the scope.

This edition coincides with ISCE exhibiting at *Firex 2016* (21–23 June Excel London). We hope to see many of our members visiting, plus interest from potential new members. Ros will be on the ISCE booth (F36) throughout the event. We always have a good representation from our Supporting Members at Firex. This year; Baldwin Boxall Communications, C-TEC (SigNET), EATON, Honeywell and Vox Ignis will be exhibiting.

On the subject of exhibitions, ISCE will also be at BPM PRO and PLASA London in September.

We are planning seminars at both events, so keep an eye on the website. I know it's a long way off, but make a note in your diary for ISCEx2017 – 7 and 8 March.

As President, I would like to officially welcome Catherine Maskell as Administrative Assistant to our Secretariat. See page 20 for more information about Catherine's role within our Institute.

As you know, we want to expand the training activities and other events within the Institute. This, of course, needs more funds to achieve our goals. The way to reach our goals is to dramatically increase our membership. If every member proposed just one new person, this will give us a chance to achieve this. Please contact Ros for more information.

I hope to meet up with many of you at Firex, BPM and Plasa, but for now, enjoy the magazine and have a fantastic Summer. ♦

Phil Price

We welcome your contributions to the magazine with editorial and advertising.

Please send news or articles to **Ros**

Forthcoming events diary

21–23 June 2016

Firex

ExCel, London, UK

22–23 June 2016

ABTT Theatre Show

Alexandra Palace,
London, UK

9–13 September 2016

IBC

Amsterdam, Netherlands

11–13 September 2016

PRO 2016

Genting Arena,
NEC, Birmingham, UK

15 September 2016

**ISCE Training:
Making waves – acoustics
for sound engineers**

Production Park, Leeds, UK

18–20 September 2016

PLASA Show

Olympia, London, UK

6 October 2016

**ISCE Training: Introduction
to live sound engineering**

venue TBA, UK

19–20 October 2016

The Showman's Show

Newbury Showground,
Newbury, UK

15–17 November 2016

Reproduced Sound 2016

Holiday Inn, Southampton, UK



Top of the league AV installation for The Southbank Bar in Nottingham

Located just a stone's throw away from the hallowed turf of Nottingham Forest Football Ground, Trent Bridge cricket ground, Nottingham Rugby Club and Notts County's Meadow Lane Ground, The Southbank Bar in Nottingham is a mecca for any sports fan heading into Nottingham's city centre. Part of the Great Northern Inns group, The Southbank Bar is the latest within the group to receive a sophisticated AV refit in order to provide the best quality sports coverage.

As part of the recent refurbishment, Great Northern Inns turned to local AV specialists, Cable Guys, to provide an audio-visual experience that would impress customers. The AV needed to deliver outstanding sports coverage and live entertainment to every inch of the bar. Cable Guys exceeded the client's expectation by installing over 24 screens, video walls and televisions to distribute high definition live sports coverage, news updates and entertainment from 8 separate AV sources, including a combination of full HD and 4K UHD to provide the best quality AV possible.

One of the main objectives was to provide multi-channel picture-in-picture functionality to the bar's 90" UHD screens. To deliver the best possible results whilst ensuring full flexibility of sources to

screens, Cable Guys worked closely with AV distribution specialists CIE-Group.

The team worked together in designing and implementing a fully integrated AV distribution system using the latest CYP HDBaseT range of 4K UHD matrices and receiver end points, together with CYP's innovative EL-41PIP.

CIE's CYP product manager Martin Featherstone explains: "Cable Guys approached us to get involved in the design and specification by offering an innovative solution in the Southbank Bar delivering HD and UHD content to a large number of screens. Within the system is the PU-8H8HBTPL-4K22, which is the latest HDBaseT Lite Matrix which delivers 4K content, as well as HDCP2.2 compliance, together with the CYP's power-over-cable HDBaseT lite receivers. We've also made great use of CYP's EL-41PIP picture-in-picture device, which allows for four separate sections of content at any one time without any bezel interference."

The EL-41PIP HDMI switch device, is particularly effective in this environment as it allows the bar to show several different sporting events on one screen. For example, the screen could display a live football match, while also showing a different live match (perhaps one that will affect the final ▶

score of the main match displayed) in the bottom right corner. This allows customers to see the full sporting story on a single screen, without having to look at another screen on their phone or at the other end of the bar. Up to four separate feeds can be displayed on one screen at any time.

Cable Guys' Lee Spicknall describes the project in further detail: "In [The Southbank Bar] we have a pretty colossal system; 8 sources; 4 Sky HD boxes, 1 band camera, a promotional computer delivering digital signage, a DVD player and of course the picture-in-picture device which enables us to overlay different sources on top of one another in multiple configurations." He continues: "There are also three CYP 8x8 matrices which control every source to every screen in the bar; what this means is that each screen can quickly and easily be configured to show whatever we want it to."

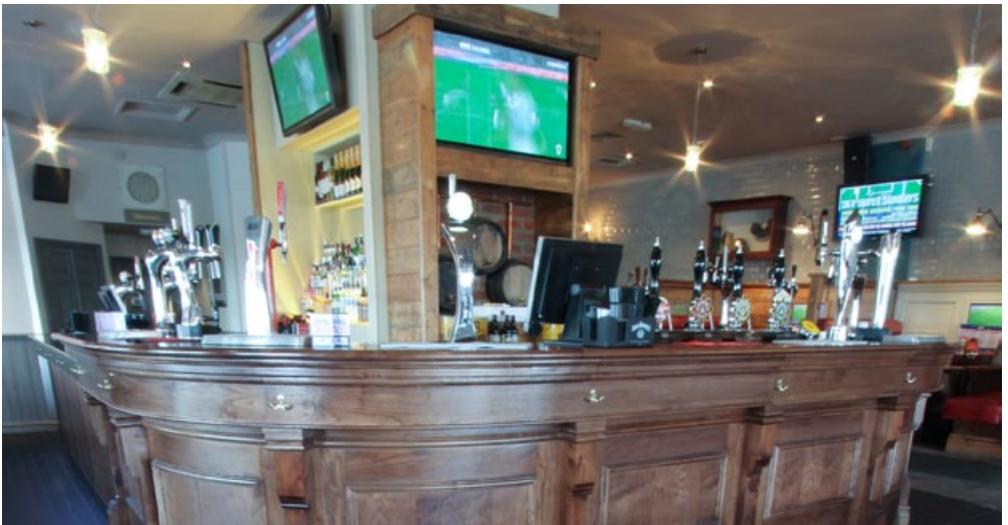
A key requirement from the client was that the install needed to provide audio to every area of the public space to ensure visiting sports fans have consistent access to live commentary. The new AV system means that customers can hear up-to-the-minute live coverage of their favourite sports throughout the bar. The Southbank Bar even went the extra mile to guarantee that, no matter where you are in the bar, you won't miss a moment of that all-important match. Speakers linked directly to the audio in the bar have been installed in the bathrooms to safeguard customers from missing an exciting moment during a natural break.

Southbank Bar manager Owen Roach, said of the new AV refurbishment: "It's fantastic. The biggest thing for us is to try to be the first to do new things and deliver the latest and best technologies to our customers. When people come to watch sport it's an experience – it should make a serious impression. I like to think we've got that all-round package – we're not just about sport but it's a huge part of what we do. It's about providing an enjoyable experience and attracting people in."

Working closely with both CIE-Group, who supplied the AV distribution equipment and manufacturers CYP, Cable Guys' Lee welcomed the high-level of support provided throughout the design and implementation of the system: "The support was great. Having Martin to communicate with at CYP and getting an immediate response was massively important to us. It goes to show that CYP have control over their products; they really can get inside their products and make them work for a particular circumstance. Both CYP and CIE-Group as our supplier really helped out and put the cherry on the cake for us."

As Cable Guys' Lee said: "If Carlsberg made pubs for watching football in, this would be one of them". And the customers at The Southbank Bar seem to agree. ♦

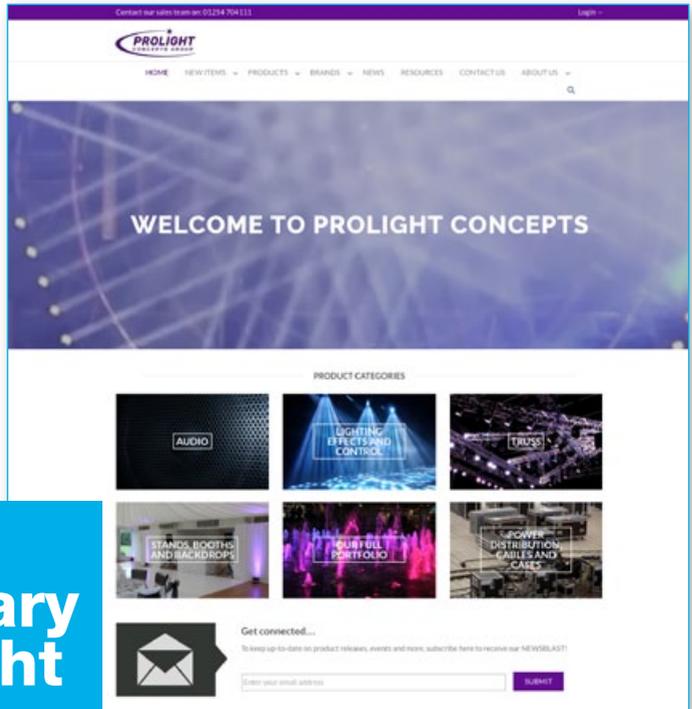
www.cie-ltd.co.uk



20-year anniversary for Prolight Concepts Group

The Prolight Concepts Group have launched a brand spanking new website, e-catalogue and ERP system to coincide with their 20-year anniversary.

The new website, www.prolight.co.uk, has been designed on a flexible user-friendly platform providing improved navigation and functionality on a multitude of devices. They still have all the same information their web audience is accustomed to, but with a whole host of extra bells and whistles. You will also notice the brand makeover with a refreshed logo and slick new style. The new website is not only compatible with all web browsers, but has also been designed to be easily navigated on tablets, mobile devices and more as it automatically adjusts to any screen size. There is extensive information on the products, brands, services they offer, who they are as a company and the team behind the brand – it has become the hub for everything Prolight!



Supporting this, Prolight have invested heavily in a new ERP system setting them apart from the competition, providing a fluid, efficient connection between themselves, the website, their customer base and the marketplace.

“The massive investment into the new-look website and ERP system represents our changing customer base and product portfolio. Over the last 20 years the business has grown considerably and continues to grow. This new system lifts us to the next level. Also, not to be forgotten, is the quality of our employees who continue to receive very positive feedback from our customers who highly value our products and service.”

Andrew Jeffrey, Managing Director,
The Prolight Concepts Group

With 20 years in this evolving industry, the Prolight Concepts Group team continue to be dedicated in providing a full, efficient and ever-developing service, coupled with continuous product development, offering the same build quality and affordability you know and expect. ♦

www.prolight.co.uk



RCF PA/VA at the home of Ulster rugby

MGA Communication's advanced integration at Kingspan Stadium, Belfast

The Kingspan Stadium, home of Ulster rugby, has completed a major upgrade of its stadium in Belfast, Northern Ireland. The construction of three covered stands are designed to match the existing Premium Stand, with a newly specified RCF PA/VA distributed sound broadcast system, linked to a fire alarm, to create a communications infrastructure that complies with BS5839 Part 8 standards.

System integrators, MGA Communication, won a competitive tender to provide an integrated voice alarm and a communications network, working with RCF's Engineering Support Group to deliver the solution. RCF's DXT7000 sound broadcast and emergency evacuation system was selected to meet the requirements of the main terraces, corridors, and mass circulation areas, as well as toilets, private corporate boxes, meeting rooms, board rooms and bar areas.

To create a matched system, RCF's premier IP55-rated P3115T speakers were chosen for the three new stands, after which MGA Communication also retro-fitted six clusters of the twin speakers in the existing Premium Stand. Six sets of twin RCF speaker clusters have been deployed in the new Grandstand with each of the

twin clusters providing an available vertical dispersion of 120° (90° horizontal) on all four axes of the ground, while four clusters of twin RCF P3115T are suspended under the roof lips at both the Memorial Stand and Family Stands behind the goalposts.

In all cases, supporting brackets were fabricated by MGA with a safety support offered by a catenary stainless steel tether system.

Gerald McKeown said the RCF solution had been chosen for its ability to fulfil several key criteria, such as meeting the necessary IP and PA/VA application rating, as well as having the required dispersion, output and frequency response. It also met the necessary price point.

In particular, the external terrace speakers provided the required adjustability to achieve full terrace coverage, ensuring that the beam-width overlapped with the adjacent cluster, with a sharp 4dB drop off at the pitch as required. All of these characteristics were previously identified in the EASE model.

Ulster Rugby Stadium Manager, David Boyd, said: "The new sound system is delivering perfectly in terms of the match day scenario and the speech intelligibility is a lot better. What we had previously ▶

was a stand-alone PA and separate alarm system which was not linked. There was no automation instruction for evacuation should the fire alarm go off.”

He confirmed that the existing PA system in the Premium Stand also needed upgrading as it was too unidirectional and rolled off at the terracing. “As the RCF PA/VA system was rolled out, initially into the ‘end stands’ it exposed the limitations on the existing Premium Stand,” he said.

“With all four stands linked into the PA we have full flexibility because it is important that each stand can be operated separately.”

The Master Control Room is located in the Family Stand, managing the four PA/VA equipment racks (one per stand), with both data and control lines linked with fire-resistant copper and fibre, in a stadium which now seats an impressive 18,150 people.

Meanwhile, the general concourses are served by RCF PL70EN ceiling speakers, RCF DU50EN wall cabinet speakers as well as the RCF P3115 speakers used for the terracing, while the RCF DP range of weatherproof projector speakers broadcasts information for those leaving and arriving at the

ground. RCF's UP 8000 energy efficient Class D series has been deployed to power the systems.

In summary Gerald McKeown said: “With RCF we have a great relationship, as can be seen by the support they gave us when we installed the [nearby] Bangor Aurora Aquatic and Leisure Complex.”

And as with Bangor, once again the system at Kingspan Stadium was pre-built and tested by RCF in Italy followed by software upgrades undertaken by MGA Communication in conjunction with RCF technical personnel, including Francesco Venturi and Daniele Torelli.

“For us loyalty and customer satisfaction and support are as important as the engineering itself. For the most part we can meet all the requirements from the RCF catalogue, and match that without own technical capabilities for providing the correctly screened cable infrastructure.

“We are extremely happy with the product. There are up to 40 or 50 parts of a system that need to be compliant and we are comfortable that RCF can meet that requirement.” ♦

www.rcfaudio.co.uk





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Making waves – acoustics for sound engineers

Presenter:

Tony Stacey MInstSCE

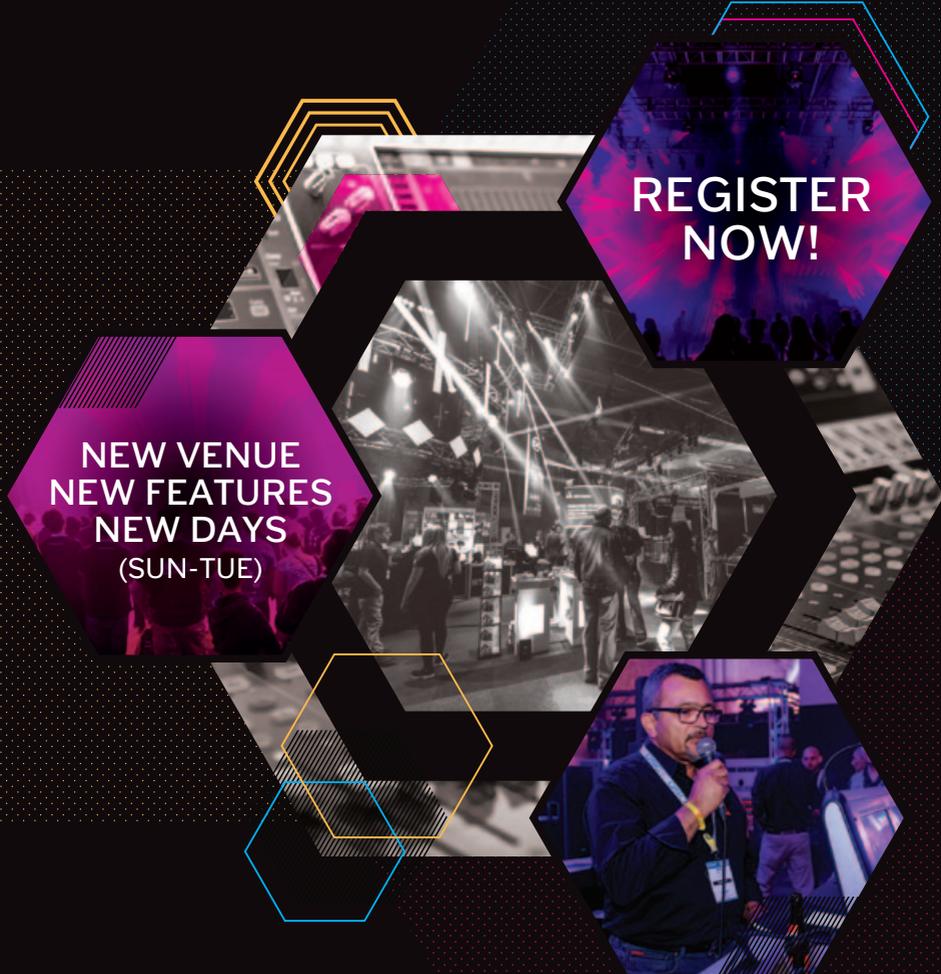
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The Royal Windsor Horse Show

A highlight in NSR's calendar

The Royal Windsor Horse Show is one of the highlights of the equine calendar attracting 1000s of spectators over five days to watch some of the best horsemen and women compete in top-class equestrian events from showing and show-jumping to carriage driving and endurance.

It is an event that NSR has been proudly involved with for many years and this year was particularly important as the show celebrated Her Majesty The Queen's 90th birthday. The celebrations were televised on ITV, as well as being promoted to a 4-star equine event this year, which attracted some of the world's top riders making for fierce competition across all disciplines.

The NSR team were contracted to supply communications for three arenas; Frogmore, Copper Horse and Adelaide, as well as the main stable area and the call up system for the stable area that housed the participants and their horses for the Queen's birthday celebrations. In addition, NSR were responsible for the communications for the Endurance competition that hosted 52 competitors from a record 13 nations around the world.

The Royal Windsor Horse Show has a romantic setting nestled as it is between Windsor Castle and the banks of the Thames. However, there is nothing romantic about setting up this show, it is more like a military operation, with the NSR team moving in a week before the show opens, to ensure it runs like clockwork throughout the five days the doors are open to the public.

NSR's equipment list for The Royal Windsor Show included more than 5000 metres of cabling, Electro Voice (EV) speakers, QSC amplifiers, an EG800 timing set, trailer units and Sennheiser radio mics to cover three show arenas and the stable areas.

NSR's range of trailer units are exceptionally popular with their clients as they provide the perfect accommodation for event personnel. The organisers of Royal Windsor made full use of NSR's trailer units, bringing in three single tier units with glass frontage for commentary teams at each of the three arenas. NSR's new all-round glass unit was sited next to the collecting ring providing the stewards with a 360° view of the collecting ring and competition arenas.

The final stage of set-up was the communications system for the start/finish line and hospitality for the Endurance competition that took riders out into Windsor Great Park to cover a total distance of 120km. NSR's remit included two full PA systems; a 100-volt line system with five 2-speaker towers and a radio mic for the commentator on the start/finish line in addition to a second full speaker PA system that relayed sound from the start/finish line into the hospitality marquee.

Set-up for the Royal Windsor Horse Show took one week and after the last spectator departed on the final day it took the NSR team just two days to breakdown. A successful show was enjoyed by all who took part and NSR was proud to contribute to its success this year and looks forward to years to come. ♦

www.nsrcommunications.com

High-frequency sounds from PA/VA systems

J M Woodgate *HonFInstSCE*

BSI originally received a complaint about sound systems producing levels of 20 kHz or so sounds at levels that caused some people discomfort. The complaint originally went to a fire alarm committee, but recently it came to EPL/100, the committee primarily concerned with sound systems.

The background of the complaint is such that we need to take action, by addressing this issue in BS 6259 (Code of practice for the design, planning, installation, testing and maintenance of sound systems) and BS 7827 (Code of practice for designing, specifying, maintaining and operating emergency sound systems at sports venues). If we do not, the complaint may be escalated to EPL/108, the safety committee, because sound emissions have been deemed to be within the scope of IEC/EN 62368-1 (Audio/video, information and communication technology equipment - Part 1: Safety requirements) (replacing IEC/EN 60065). This might well result in mandatory requirements that would be very difficult to meet. But once you say 'safety', 'difficult to meet' doesn't count for much.

We were able to tack a discussion of the subject on to a recent meeting of the 'talker training' committee, which resulted in the following conclusions:

- 1** Significant levels of ultrasound (19 kHz – 20 kHz mostly) are emitted by some sound systems. A member will do some measurements but stresses that ordinary sound level meters are of no, or very uncertain, use and measurements are difficult because the level can vary a lot over a small distance, such as 20 mm, due to the very short wavelength at these frequencies. There is no practical difficulty in designing and making a suitable meter, and suitable microphones already exist (at a price).
- 2** There is a British Standard on ultrasonic cleaners that includes sound level measurements.
- 3** We cannot specify anything, because there is no 'specification' (with mandatory requirements) for sound systems and indeed there could not practicably be one, due to immense complexity. We can recommend in BS 6259 and BS 7827, and any deviation from a recommendation has to be justified (but that is often not policed).

4 We cannot recommend an upper limit of sound pressure level, because that would amount to a claim that it is 'safe' and there is no research result to support such a claim.

5 We can recommend that the loudspeaker line voltage does not exceed [x] % of the rated line voltage. (But even 1 % represents 80 dB SPL if rated line voltage produces 120 dB SPL.)

6 For a longer-term solution, we can recommend using a frequency of 25 kHz or higher, if new research confirms challenged historical results that indicate a tolerance of much higher sound levels than at 20 kHz.

It was initially proposed that the preparation of the above-mentioned amendments would be entrusted to the newly-revived Panel EPL100/00/02, but that has proved impracticable, so the preparation of the amendments will be carried out in EPL/100 itself.

A research paper indicates that there has been a lack of reliable research on this subject for many years, and existing conclusions about tolerable sound levels are suspect. This paper is:

Leighton TG. 2016, *Are some people suffering as a result of increasing mass exposure of the public to ultrasound in air?* Proc.R.Soc.A472: 20150624. <http://dx.doi.org/10.1098/rspa.2015.0624>

ISCE is, of course, well represented on EPL/100 and ISCE members will be kept informed of progress.

It is likely that high-frequency sound levels have risen over the past many years, as the performance of loudspeakers has greatly improved. Other products, such as pest deterrents, deliberately produce high levels of ultrasound, and may also be the subject of complaints, but these are not our responsibility. ♦

Birmingham New Street Station PA/VA System

Phil Parker and Chris Hales



The redevelopment of Birmingham New Street Station is one of the UK's largest engineering projects of recent years. It has seen the old, unloved and overcrowded 1960s concrete structure transformed into a modern environment with three and a half times the original concourse space.

As well as being involved in the structural and architectural design of the station, Atkins undertook the detailed design, installation and commissioning of the new communications and security systems. These included the Converged Internet Protocol (IP) Network, CCTV, access control, airwave and

station radio systems, mobile network, and the public address / voice alarm (PA/VA) system.

The PA/VA system consists of 12 racks of control equipment, supplied by ASL, which are distributed across 10 equipment rooms. Each location is linked via a BS5839-compliant Ethernet network to ensure compliance with the VA standards and the converged network for automated train customer information announcements. Ensuring the architecture and interfaces of the solution met the relevant standards required a sophisticated and holistic response.

As the station was in continual operation during the construction works, one of the early activities was to migrate the existing station speakers onto the new system. In order to facilitate this, ASL X Series amplifiers were utilised, providing alternating current (AC) and direct current (DC) monitoring capabilities. As each area of the station was constructed, the new loudspeakers were added to the system. Dynamic ambient noise sensors (ANS) are used within the central atrium and platform areas to manage the sound pressure level of announcements as the ambient noise changes.

The complexity and size of the system were not the only challenges faced by the project team. The acoustic performance of the system had to be modelled at the design stage to demonstrate a suitable standard of speech intelligibility and audibility, as well as being tested at completion to verify compliance. The acoustic conditions in railway stations can often be harsh, with high noise levels and excessive reverberation times conspiring against achieving the target Speech Transmission Index (STI) requirement of 0.50 in accordance with BS5839 Part 8.

An acoustic model was developed for the ground level of the station, which includes extensive concourse areas, providing access into the station and routes to the platforms below. The key focal point of the

concourses is the new atrium, standing more than 25 metres high with an Ethylene Tetra Fluoro Ethylene (ETFE) roof that lets in natural daylight, providing a welcoming and futuristic space for busy commuters and travellers. The atrium forms a central hub for the station that includes the main customer information displays, and leads to the re-developed Grand Central shopping centre on the floor above.

It was relatively straightforward to design and model loudspeaker coverage for the main concourse areas. The full height of these areas is 5.5m to the concrete slab above and most of the surfaces are predominantly hard and acoustically reflective. Reverberation times were controlled with vertically arranged acoustic baffles suspended below the structural slab. The wave-shaped baffles consist of a perforated metal cassette housing a mineral wool insert. The 'waveform ceiling' not only provides acoustic control, but forms part of the overall aesthetic appearance and visual identity of the main concourse areas. Loudspeaker coverage was provided by 'projector' type loudspeakers set out on a 4.5m grid arrangement.

The central atrium presented far greater challenges, and despite the team demonstrating the benefits that could be offered by introducing acoustic absorption into the space, architectural constraints meant that the space consisted largely of hard surfaces,



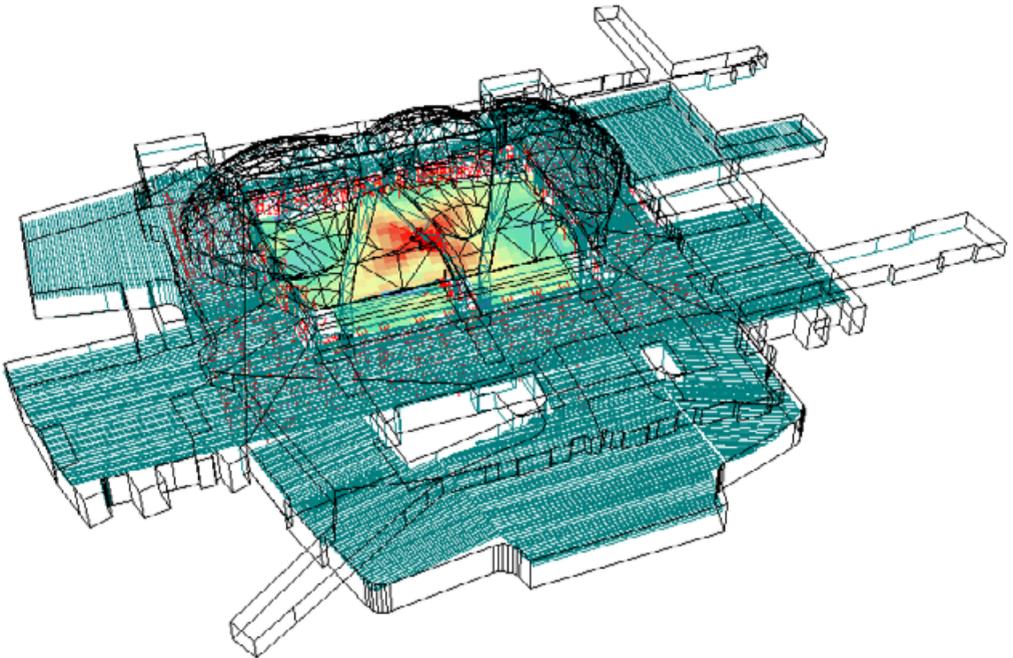
albeit with a greater degree of absorption offered by the distinctive ETFE inflatable roof. The resulting reverberation times were predicted to be in the order of five seconds. Noise levels were also expected to be high, with the introduction of open-seating cafe/dining areas around the perimeter of the Grand Central shopping area above.

A number of different loudspeaker solutions were trialled, initially with constraints on the sizes and positions of products that could be employed. The acoustic model developed for the atrium revealed poor results, and repeated design iterations and fine tuning were required to finally arrive at a solution that had the potential to work. Moving away from the initial design intent to distribute column loudspeakers around the atrium, we showed the benefits of using a single centralised cluster of active, steerable line arrays which met the target STI.

The central loudspeaker arrangement consists of four Intellivox DSX280 line arrays from JBL, housed within a 'totem' made of acoustically transparent perforated metal, and designed specifically for the project. Each loudspeaker is configured to cover over 30 metres to the edge of the atrium, where the lower height wave ceiling areas begin. A single Intellivox V90 passive array loudspeaker infills one area behind the catering kiosks that would otherwise block effective coverage from the central loudspeaker cluster.

Testing of the new system was essential for its sign-off, in order to prove that the STI targets had been satisfied, and was witnessed by Network Rail before the new station was opened to the public by the Queen in September 2015. Optimisation of the system performance was subsequently carried out by fine-tuning each zone's output levels and equalisation; a challenging task in itself given the delicate balancing of this complex system. ♦

chris.hales@atkinsglobal.com



Acoustic model of the concourse areas showing STI map in atrium

Baldwin Boxall updates its look

Baldwin Boxall is pleased to announce the launch of a new logo and refreshed look, reflecting the company's ethos of ongoing improvement and evolution of the brand. The new logo is updated, while keeping its traditional, and highly recognisable, blue triangle. The rebranding exercise has included a fully responsive website and modernised exhibition stand.

During the website redesign Baldwin Boxall insisted that there must be no loss of content as the company is keen to ensure that it is as informative as possible. Despite its size, the website is easy to navigate, with plenty of interesting content and includes a new look downloads area. As well as the usual product leaflets and instruction manuals, the site also contains informative items such as presentations, 'how to' videos and other resources which are well worth browsing.

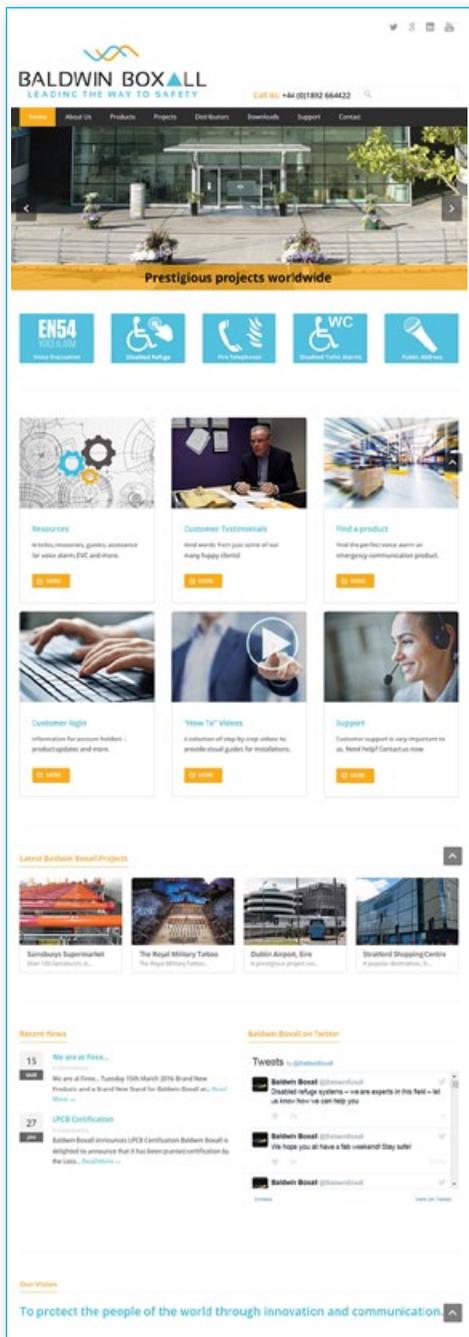
With regard to the exhibition stand – well, the traditional look Plug & Socket is no more. Replaced with a modern design, you could be one of the first to see it if you are visiting Firex this year.

Nick Baldwin, Marketing Director for Baldwin Boxall, said: "We have taken a good deal of time to ensure that we get this right. The new stand looks stunning – and we will have a lot to tell you if you are able to visit us at Firex. Please remember that you will not be looking for the oak barrels though.

"The new website is one that we plan to add to frequently, so what you see now may not be what you see next time you visit! Because of this, we are keen to hear from you – whether a customer, end user, engineer, consultant, or other interested party – if there is content we could add which will be useful to you or your colleagues."

Baldwin Boxall has a very clear mission statement which can easily be found on the website and is proud of its place in the industry. ♦

www.baldwinboxall.co.uk



PLASA Focus, Leeds

10 & 11 May 2016



At PLASA Focus in Leeds last month, Ros was kept busy for the duration of the show. With a constant stream of visitors to the ISCE stand, she was delighted to see so many existing ISCE members and meet some potential new recruits as well.

On day two, ISCE's supporting member, Audio-Technica, presented a brilliant seminar on behalf of ISCE, titled *Exploring the Advantages of 100 Volt Line Audio Systems*. Rodrigo Thomaz, Senior Technical Product Specialist at Audio-Technica, discussed the advantages and destroyed the myths of installing 100V line systems, making installations easier and quicker.

The feedback we received from the PLASA team and the delegates was great; everyone felt the session was really informative and Audio-Technica generously gave away a free impedance meter to everyone that came along to the talk. ♦

Catherine Maskell joins ISCE



ISCE has appointed Catherine Maskell to join the ISCE team as a training administrator, reporting to Secretariat Manager, Ros Wigmore.

As a learned society, the Institute recognises how important it is that we provide an excellent training programme for the sound industry and the appointment of Catherine will ensure we have the support in place to roll out new and existing courses over the next 12 months and beyond.

Catherine has recently worked as a recruiter for clinical trial candidates at Reading University and previous to that worked at Virgin Atlantic initially as a senior flight attendant, then as a cabin crew senior despatch officer.

I know you will all wish Catherine well in her new role with the ISCE.

For any training enquiries, please contact Catherine on catherine@isce.org.uk ♦

CALL FOR ENGINEERING NOTES

ISCE Engineering notes are available for all ISCE members to view on the members' only pages of the website. The general public can access the notes on the Resources page, after a period of time has elapsed.

Engineering notes are a useful learning tool that will enhance your knowledge or simply refresh your memory. They cover a wide spectrum of subjects and should be about things that are not already well explained in textbooks; things that are of practical significance and that people have trouble or uncertainty coping with.

We need more engineering notes to share with our members, so if you, or your company, wish to contribute to the library of notes, please send your copy to tech@isce.org.uk for review.

Generally, solutions should have a mathematical proof based on the laws of physics, but the maths need not always be shown in the note; it could be supplied on request. This is to avoid 'hand-waving' solutions and even mistakes.

Bernard Bibby *FlinstSCE* leads from the top



As the Orchid (male cancer) charity Ambassador for Kent, I must be seen leading from the front, well in this case from the top – the top being 541 feet high on the roof of the Broadgate Tower skyscraper, next to Liverpool Street station.

It was an unbelievable day, the sun was shining and there was no wind. The lift to the roof moved at such a speed that my ears popped. When I got to the launch platform there were 4 ropes running over the edge down to the ground, I was attached to the rope and given some basic instruction.

I was not at all apprehensive as the entire operation was organised by the Mile End Climbing Wall group, all professional climbers and instructors and the day before I had been given some basic instruction by my local Gurkha 36 Engineering Regiment in Maidstone.

So, over the top and have a good look down and around at the view of the City laid out before you, Crystal Palace, BBC TV mast in one direction and Canary Wharf in the other.

Due to the height, we had to go down with one of the professional team as an insurance safety measure.

It was all over so fast, I asked if I could do it again but due to the number of people, there was not enough time for a second drop.

Dressed as Barron Von Rothbart (Mr Nasty from the ballet Swan Lake), one thing about London is you can walk through in any get-up and all they want to is have a photograph with you.

Today the Broadgate Tower, tomorrow the North face of the Eiger – well after a bit more practice. ♦

www.justgiving.com/bernard-bibby

New Supporting Members

biamp.



Biamp Systems' commitment to the development and continuing education of the professional AV industry is a core value and founding tenet of our culture at Biamp. In this spirit, the work carried out by ISCE naturally aligns with Biamp, and it was a logical step to become a supporting member and have closer involvement with the institute's activities.

We believe in the positive influence professional organisations play in furthering the growth and development of our industry, and we look forward to collaborating with such a prestigious body. ♦

www.biamp.com



If you want to join a select group of companies who have chosen to encourage us in our efforts to improve technical standards and practices within the sound industry, contact Ros for an application form or go to www.isce.org.uk/supporting-members/

Leisuretec Distribution Ltd are delighted to announce their new appointment as a Supporting Member of The Institute of Sound and Communications Engineers.

Leighton Buzzard-based Leisuretec are distributors of Professional & Commercial Audio, Lighting, AV, Video and Special Effects to the Trade.

Cliff Dounting, Managing Director, said: "While we have been aware of the ISCE for a long time, it all started to make sense when we attended this year's networking dinner, followed by the ISCEx exhibition at Coombe Abbey. We had the opportunity to have our 'eyes opened' after meeting the great team behind ISCE and the many different companies and industry colleagues.

"The ISCE is a really good thing to help the industry develop the skills, capabilities and knowledge of professional audio engineers. If we don't invest in this valuable resource along with tomorrow's engineers, we clearly will not be doing the right thing. To join as a Supporting Member provides Leisuretec Distribution with a great opportunity to give something back.

Leisuretec's very large investment was to create a wonderful learning and development facility at our premises in Leighton Buzzard: The TecZone. It's a great facility that we are pleased to offer the ISCE as one of its training course venues, which will also compliment the learning and development events Leisuretec are providing in partnership with our main suppliers. So it should be a 'win win' for ISCE members and Leisuretec's trade customers. We look forward very much to working with the ISCE team". ♦

www.leisuretec.co.uk

Ampetronic partners with Showsupply to deliver Swiss hearing loop solutions

Ampetronic is pleased to announce its partnership with Showsupply. The partnership will expand Showsupply's portfolio to include assistive listening technologies and the provision of comprehensive solutions and educational training to customers across Switzerland.

The addition of induction loop technology compliments Showsupply's already established offering of leading audio brands and invites the opportunity to expand into a new market.

Over the past 25 years hearing loops have become the default assistive listening solution in Europe, Scandinavia, Australasia and the USA. This is primarily as a result of technological advances by Ampetronic and the efforts of people with hearing loss, who are demanding the benefits that this technology can bring to them.

Ampetronic's Sales Director Martin French said: "After decades of successful market development, and following the closure of MediaDist by parent company Kilchenmann, Ampetronic were looking for the right partner to scale up activities across Switzerland to capitalise on the growing Assistive Listening sector.

"We are delighted to partner with Showsupply, a company that shares our commitment, not only to quality technology and market education, but also in improving the lives of people with hearing loss. Showsupply understand the need to deliver standard compliant systems that provide a genuine benefit to the end user and are working closely with the Ampetronic team to ensure that they are fully trained in all aspects of the technology. Knowledge that they can pass on to their own clients". ♦

www.ampetronic.co/

Front seats in the Abbey

Tony Barns *MInstSCE*

Reading Bill Mackie's review of Neil Tuckwell's book describing his adventures bringing television to the Highlands in the last ISCE magazine, it prompted a memory...

A bus ride near Pitlochry became memorable when I got chatting to the dear old Scotswoman sitting beside me. It turns out that she had followed an unusual path through life, being brought up in Rhodesia as the daughter of a diplomat, and marrying a sailor who was later to become an admiral, now sadly deceased.

They had moved to her family home in the north of Scotland where they lived an "isolated but comfortable" life. I asked her about life in the Highlands in those days, and was fascinated by the description. Being interested to know how much, if any, technology they had, I asked "and what about television in the 1950s, were you able to watch the Queen's Coronation on TV?". She took a moment to compose her answer, then said, carefully, "We didn't have television, but we did see the Coronation. We were there -- we had front seats in the Abbey".

Suitably put in place, I continued our conversation, a little bit awkwardly. ♦

We are sure many of you have met some interesting, and possibly famous people throughout your careers and have stories like this to share with other members.

Please keep sending them in to Ros.

plasa 2016

LONDON, OLYMPIA | 18-20 SEPTEMBER

PLASA 2016 Re-focused

After substantial market research PLASA 2016 is moving back to the heart of the city to London Olympia on 18-20 September.

See the very latest live entertainment technology, live product demos, technical workshops and the free to attend seminar sessions.

Register free today
www.plasashow.com/2016

Book a stand
www.plasashow.com/enquiry

plasafocus
GLASGOW | 18-19 JANUARY, 2017

plasafocus
LEEDS | 9-10 MAY, 2017

1/5

of audience is international from 70 countries

56%

specify or are final decision makers, that is more than 5,000 key buyers

41%

of PLASA visitors haven't visited any other show in the past year

74%

of visitors are more likely to visit now that it has moved to West London

plasaevents

Europe

EN 54-16

Work is continuing in CEN TC72 WG23 on the revision of EN 54-16 (VACIE) to (hopefully) make it clearer and to bring it into line with the Construction Products regulation.

It is also hoped to allow some VA components, such as power amplifiers to be CE marked and placed on their market on their own, rather than with VACIE central equipment.

EN 54-24

Work on the revision of EN 54-24 (loudspeakers) has taken a back seat for the last 12 months due to EN 54-16 taking precedence.

Apart from bringing the standard into line with the CPR, WG23 hopes to improve the tests for large loudspeakers and to bring active loudspeakers into the scope.

EN 50849

EN 50849, which will replace EN 60849, has been sent for vote.

UK

BS 5839-1 is currently being revised and BSI FSH/12/5 will decide whether to revise BS 5839-8 and BS 5839-9 once that work is complete.

Comments on the current versions of these standards are invited, please contact me via Ros and I will send the commenting form.

Disclaimer

This information is believed to be correct but it is not guaranteed and neither the ISCE nor its officers can accept any responsibility in respect of the contents or any events arising from use of the information contained within this document.

ISCE MEMBER -GET-A- MEMBER SCHEME

£10
for any
new member
successfully
introduced

The success of the ISCE depends very much on the size of its membership. The greater the membership, the more subscription funding is available, and the more we can do for you.

We all know someone who will benefit from the membership of our developing Institute. All you need to do is persuade your colleagues and contacts to apply to join the Institute and we will do the rest.

Your efforts will be rewarded with a £10 voucher (John Lewis or Marks and Spencer) per member successfully introduced. The voucher will be sent on the annual subscription date (normally April).

You may already know a specialist within a local council, a large organisation, a college or even

a theatre. The more we can spread our influence, the greater will be the return, so everyone will want their installation or service carried out by an ISCE member.

Perhaps one of our most successful initiatives has been the Supporting Member scheme. If you know of a reputable company that would benefit from being a Supporting Member, then please send us the company name and the contact details of the Chief Executive, or the ultimate decision maker and we will get in touch with them. Once again, your efforts will be rewarded in the same way as for the MGM scheme.

If each member recruits just **one** new person,
we instantly double our membership

New Members June 2016

Member

Ted Dalton
Dalton Acoustics Ltd

Antonio Ferrari
RCF Spa

Dan Wittenberg
Application Solutions
(Safety and Security) Ltd

Affiliate Member

Matthew Cook
Ateis Europe BV

Senior Technician

David Neath
Sound4Churches

Adam Florio
AV Systems Ltd

Technician

Martin Clements
Baldwin Boxall
Communications Ltd

Oliver Smith
Baldwin Boxall
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Neil Lewis
AV Activ Ltd

Neil Turrell
AV Activ Ltd

Associate

Clare Armiger
Public-i Group Ltd

Supporting Members

ADSWorldwide, Manchester
www.ads-worldwide.com
Mr J Houldcroft *MInstSCE*

Ambient System Sp. z o.o.
www.ambientsystem.eu
Mr R Siatkowski *AMInstSCE*

Ampetronic Ltd, Nottinghamshire
www.ampetronic.co
Mr J Pieters *MInstSCE*

AMS Acoustics Ltd, London
www.amsacoustics.co.uk
Ms H Goddard *FInstSCE*

Arup Acoustics, Manchester
www.arup.com/acoustics
Mr D Hiller

Atkins Acoustics, Noise & Vibration
www.atkinsglobal.com
Mr C Hales *MInstSCE*

Audio Logic Ltd, Essex
www.audiologic.co.uk
Mr A Lewis

Audio-Technica Ltd, Leeds
www.audio-technica.com
Mr H Roberts

Baldwin Boxall Communications Ltd, East Sussex
www.baldwinboxall.co.uk
Mr N Baldwin *AMInstSCE*

Biamp Systems, Oregon, USA
www.biamp.com
Mr Martin Bonsoir

Black Light Ltd, Edinburgh
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www.blacoustics.co.uk
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Broadcast Sound Systems Ltd, Lancashire
matthew@broadcastsounds.co.uk
Mr M Tugwell

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www.cie-group.com
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www.clarityuk.co.uk
Mr G Palmer *AMInstSCE*

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Mr A Green

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www.cuk-audio.com
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Mr S Binks

DJ Kilpatrick & Co Ltd, Belfast
www.djkilpatrick.com
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Monacor UK Ltd, Newport Pagnell
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Mr N Clayton

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www.msiaudiosystems.com
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www.nebulaaudio.co.uk
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Mr G Collyer

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Mr I Bland

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