LONDON LIVE

MRMC
MARK ROBERTS MOTION CONTROL

LONDON LIVE

CASE STUDY

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A Nikon Company

Nikon

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BACKGROUND STORY

London Live is a local TV channel based in London, England. The channel transmits local news, current affairs, sports, arts, events and entertainment and was launched on the 31st March 2014.

MRMC is a manufacturer of motion control robotics. Based in Surrey, England, the company has been servicing the motion picture and TV industry for over 40 years.

In September 2013 MRMC and LL began discussions around ways to employ motion control robotics to realise a radically different approach to broadcast studio content acquisition and workflows.

Headed by Technical Director, Bryn Balcombe, the LL team saw an opportunity to challenge traditional assumptions of the look and format of TV news and current affairs programmes.

LL is owned by the parent of The Independent and The Evening Standard newspapers and broadcasts from the same headquarters at Northcliffe House in Kensington. The existing environment was already producing local stories and digital content on a daily basis, so the challenge was to turn that content into moving images.

LL were awarded the London Local Digital Television Programme Service License from Ofcom based on producing a quota of local news and current affairs content, supplemented by entertainment content focussed on London.

"HAVING WORKED CLOSELY WITH NIKON DESIGNING ROBOTICS FOR THE LONDON 2012 OLYMPIC GAMES, MRMC INTRODUCED LONDON LIVE TO THE BESPOKE INTEGRATION ASPECTS OF TURNING DSLRS INTO TRUE REMOTE SYSTEMS"

INNOVATE TO DIFFERENTIATE

The perception of local TV is low budget technology often resulting in a cheap and static look. London Live set out to innovate and challenge this notion and without the budget of National TV studios, opted for a different look using full frame sensor cameras. With developments in DSLR camera technology allowing for high quality HD video functionality in addition to a cinematic shallow depth of field look, the team began looking for a supplier that could integrate this technology in a studio environment.

Having worked closely with Nikon designing robotics for the London 2012 Olympic Games, MRMC introduced LL to the bespoke integration aspects of turning DSLRs into true remote systems. The systems were inaccessible for the duration of the Games and were controlled remotely up to 1km away, consistently, every day of the tournament. This accomplishment by MRMC gave the LL team the confidence they needed to start utilising this technology.

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AFC PAN & TILT HEAD

LONDON LIVE STUDIO

MOVING FROM THE STATIC SHOT

Providing all manned cameras was not commercially viable, so the choice was between a continuous single camera shot using a steadicam or a multi-camera switched feed using robotics. The latter was chosen as it offered a greater range of options such as reliability, redundancy and a consistent look to shows.

The ability to choreograph multi-camera moves was a central target to achieve the look and feel of the studio content. To achieve budget targets these moves had to be easily programmable by one person with the minimum level of training. Complex multi axis camera motion, repeatable time and time again with complete accuracy, is central to MRMC's products and services.

The main London Live studio is a long but narrow space and the cameras needed to provide transitions between programme segments often shot at opposite ends of the studio.

The solution uses 6 x AFC-100s pan and tilt heads and Studiobot, a specially commissioned 9-axis industrial robotic arm. Designed with 10m of track that runs along the back wall of the studio, the Studiobot is the workhorse of every live production.

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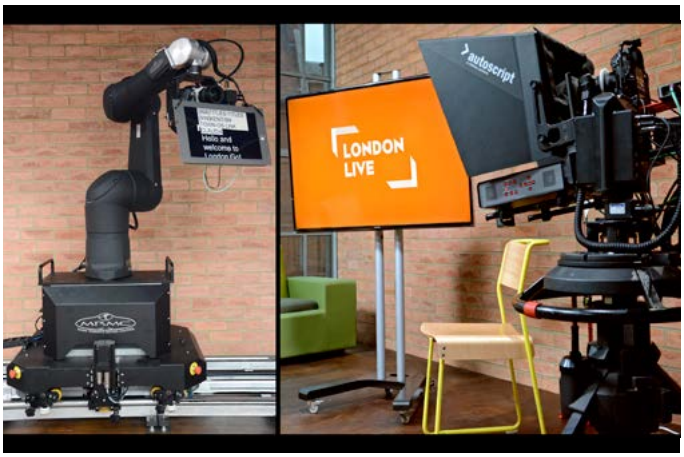
WHY AN INDUSTRIAL ARM?

When repackaged with the necessary support accessories and motion control software, industrial arms have the ability to supply a range of motion possibilities similar to a human arm in dexterity. In addition to traditional moves such as pan, tilt and lift, these arms can reach, retract, roll and curve. On air camera motion thus becomes more interesting, intuitive and natural looking.

With a greater range of 'off the shelf' options available, the industrial robot is also a cost effective solution compared to traditional studio camera systems.

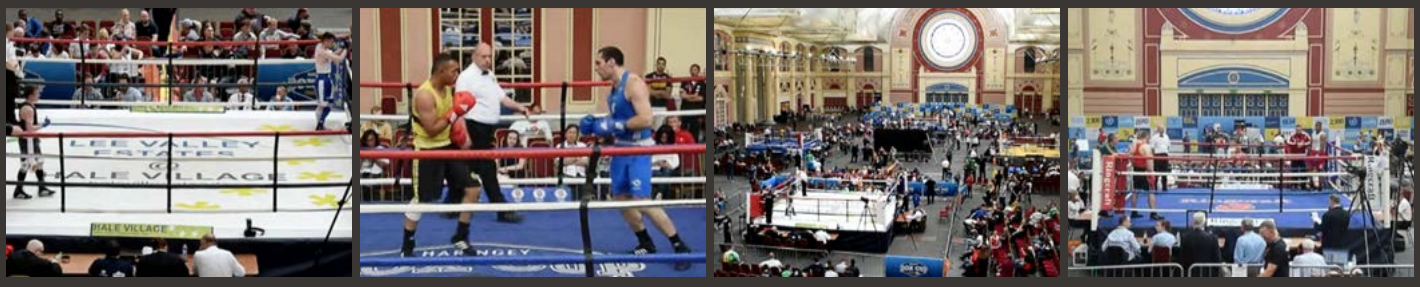
Combined with pedestal-mounted AFC-100s, each show can be set up in advance with minimal repositioning. Each axis provides high resolution encoder feedback creating an impressive range of repeatable motion throughout the entire studio.

The Studiobot and AFC-100s system architecture allows the Nikon D4s cameras and Nikkor lenses



STUDIOBOT & AFC HEAD AT LONDON LIVE STUDIO

to become fully remote cameras, providing smooth motorised zoom and follow focus, power, HD-SDI video pass through, frame synchronisation and camera control integration. The entire system works over IP, consolidating all camera and motion control to a single push button operating console.



LONDON LIVE: BROADCASTING BOXING EVENT

WORKING THE ASSETS

From the outset London Live used the same DSLR technology both for their field and studio productions. Everyone from the video journalists to the studio technicians has an understanding of the technology, allowing for ease of deployment and continuity of look throughout the channel's output.

This inter-changeability has also allowed for the live coverage of large scale London events outside the studios. Because of the compact and lightweight format of the AFC-100s and Nikon D4s, all the studio cameras are able to be redeployed to such events within the same day.

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MEETING BUDGET RESTRAINTS

In the past many broadcast studio systems have locked in a particular workflow from inception without the potential to expand or exploit new technological developments. By carefully selecting modular components from various open-architecture inclined venders, London Live not only kept costs low, but ensured a platform of potential innovation. Such an approach produced a 700% saving in technology and operating overheads when compared to an equivalent large network news studio.

MRMC robotics continues to play a central role in providing development paths. Having developed interfaces for leading target tracking companies, the creative choices for a range of automation is now possible without the high associated costs.

KEY POINTS:

- MRMC's bespoke integration with Nikon's DSLR technology allowed London Live to realise the look they wanted with all the control and automation features required for a professional broadcast studio
- Industrial robotic arms with a high specification level MRMC integration and motion control software, offers an innovative and cost effective studio work horse
- Modular and portable, the AFC systems allow for higher utilisation across both studio and OB applications
- Future proofing with IP workflows and new generation tracking systems
- Significant cost saving benefits

LONDON LIVE: BOXING BEHIND THE SCENES WITH MRMC ROBOTICS

CONTACT US

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