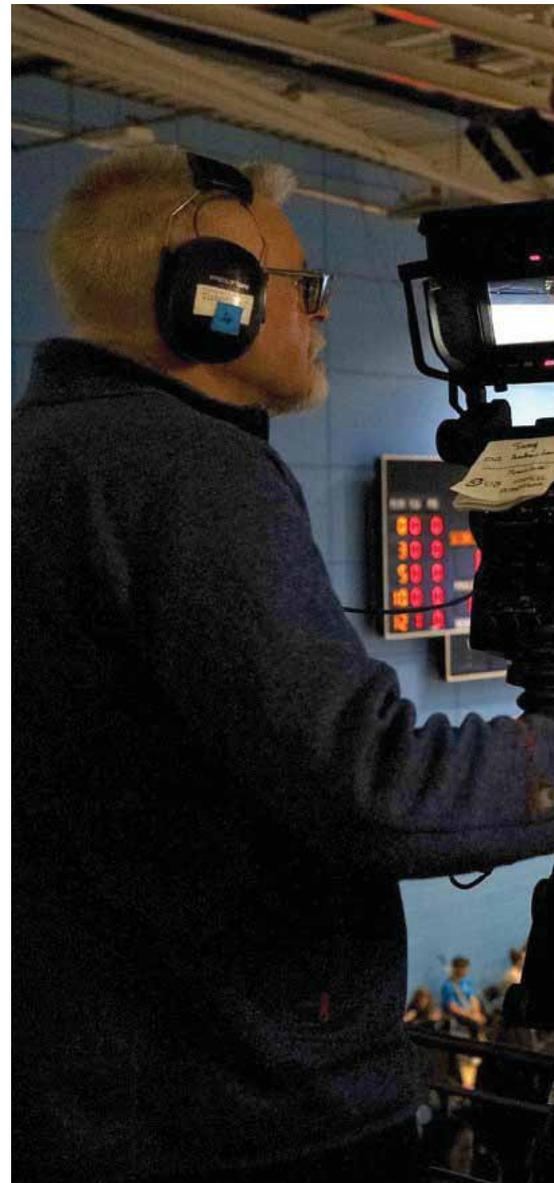




GTC Member Mark Sheridan rigging an AtomOne Mini Camera behind the hoop.



Camera operator James Watson covered the game on an RF camera from behind the hoop.

Timeline TV's innovative production techniques help to captivate millions of basketball viewers

The rapid growth of Basketball and Timeline TV's remote broadcasting techniques used by the **British Basketball League** is transforming the game.

By Graeme McAlpine

Basketball is one of the UK's fastest-growing sports, with 11 million people interested in the game. This season, the British Basketball League has seen a complete overhaul of their output.

The British Basketball League is the men's professional basketball league in Great Britain and for over thirty years has represented the highest level of play in England and Scotland. From the 'Plymouth City Patriots' in the South West, up to the North with the 'Caledonia Gladiators' in Glasgow. There are currently ten franchises that jointly own the British Basketball League.

I caught up with James Watson, one of the Timeline Television Camera Guarantees for the British Basketball League.

Among the key elements of this game plan is the British Basketball League's

new production studio, which has the technology to create numerous virtual reality environments. Along with this is their use of 'remote' outside broadcasting techniques. Amid record-breaking viewership this season, I asked James to explain the production technique involved.

Timeline TV has the contract to provide the technological resources necessary for both the remote outside broadcasts and the centralised production control, MCR, and virtual reality presentation studio. The production team for the British Basketball League is based on the second floor of the new Timeline Ealing Broadcast Centre (EBC) in West London.

Sustainable production is an important factor for broadcasters these days and the COVID epidemic saw many productions switching to a 'remote' way of working. Many in the industry foresee this method of



GTC Freelance Camera Operator Mark Sheridan on camera two at Guildford.



broadcasting as becoming the new 'norm'.

The coverage of the British Basketball League matches is achieved with three remote portable production units (PPU) leapfrogging around the country. These remote camera feeds are delivered to the EBC via high-speed internet solutions. By reducing the number of crew required on location, an extremely sustainable way of working is achieved.

The director, producer, sound and vision mixers, replay ops, 'racks' engineer, and commentators all remain at the base. Just the camera operators, sound guarantee, rigger, floor manager, and an engineer, travel to the location, along with a reporter for the Tier A games, thus delivering a remarkably 'green' solution to their production.

Timeline's on-site coverage for the British Basketball League matches varies slightly

from game to game, with their 'Tier A' coverage having 8 cameras per game. On these main matches, they have four cameras that are operated and four that are 'locked-off'.

Cameras one, two, and three are Sony HDC 3100 camera heads, connected to the local PPU by traditional SMPTE cables. Camera one is the master centre-wide shot from the back of the audience, with a Fuji UA 22:1 lens. Camera two - besides camera one - is the close-up camera with either a Canon 86:1 or Fuji 80:1 UHD lens on a heavy-duty Vinten tripod. Camera three is a hand held behind one of the hoops with a Canon CJ 12:1 lens.

At the other end of the court is camera four, which is a Sony PMW 400 camcorder, also with a CJ 12:1 lens and fitted with a Boxx RF unit to transmit to the local PPU. This camera is the RF hand-held, based behind the other hoop, it also covers the players 'flash' interviews and covers the team coaches' court-side. Because it is a camcorder, it can be used to pre-record exterior shots to SxS cards of both the venue and team arrivals for later playback.

The remaining cameras are all fixed 'locked-off' cameras. Cameras five and six are AtomOne mini cameras and are fitted on magic arms behind the hoops at each end of the court. Camera seven is framed on the countdown clock and is a Blackmagic Broadcast URSA camera with a Canon HJ 20:1 lens. Camera eight is the 'beauty camera' wide shot and is a Blackmagic Pocket Camera.

Having worked on the studio operation end of the show at the Ealing studios, I asked the Production Manager, Amy Butler at the British Basketball League if I could go along and meet the outside broadcast camera team at work. The following Saturday she arranged for me to visit the Surrey Scorchers v Manchester Giants game. This was a Tier C match taking place at the Surrey Sports Park, Guildford. Tier C games use only 6 cameras, with three camera operators. A similar rig to Tier A, but without the cabled handheld and only one locked-off 'hoop' camera.

At Guildford, I was made most welcome by the three camera operators, all of whom are GTC members. James Watson was the Timeline staff guarantee, along with freelancer camera operators, Neil Foster and Mark Sheridan.

James is one of the many staff camera guarantees at Timeline Television, working for the company both at home and abroad on OB's and also at the Timeline studios. He, like his staff guarantee colleagues, supports the freelance camera crews on Timeline's behalf, managing the kit as well



Remote racking at EBC of Studio and OB cameras.

as camera operating on most shows. On these British Basketball League productions, the camera guarantee also helps manage the relationship between the production team back at the base and the camera crew on-site.

I asked James about this new 'remote' approach to outside broadcasting. He explained that it was a quick and efficient arrangement. I watched as the Timeline kit arrived as planned only five hours before the 'tip-off' (the start of the match). The PPU was wheeled into the venue and with only a few cables to rig, everything was quickly set up.

Once on location the crew swiftly got the kit built and working, before checking that the cameras were being seen in Ealing and that the (remote) 'racking' engineer at the EBC had full control of the cameras. The feeds are carried to and from the location over IP using two Sapphire TXRPM encoders and one decoder on-site. The outgoing feeds have three concurrent paths, a

dedicated high-speed connection, a backup 'venue' IP, and a Mobile Viewpoint WMT cellular bonded backup system which can be cut locally by the Timeline engineer in an emergency.

Like all remote productions, Neil explained that because the actual 'vision mixer' cut takes place in Ealing, the remote camera cue lights will exhibit a slight latency and that you need to take that into account and not whip between shot changes.

British Basketball League utilises Timeline's Studio Three, on the 1st floor of the EBC, with its fast turnaround purpose-built virtual green screen set. Graphic specialists at MOOV TV have created an array of impressive virtual sets for the league programmes, allowing them to digitally transform the environment of their live studio. Virtual reality (VR) technology replaces the studio background with a fabricated version rather than simply adding to the foreground reality, which is the case with augmented reality (AR). VR

broadcasting normally uses a green screen to combine two images or video streams, while allowing the virtual background to change relative to the real-world camera movements and shot changes.

MOOV's VR render engines are supplied with positional information from the studio cameras by the Mo-Sys StarTracker system. Mo-Sys are GTC sponsors and their tracking technology works by utilising a special camera (mounted on top of the broadcast camera) looking up at 'stars' above it. These stars are small reflective stickers randomly applied to the studio ceiling.

The StarTracker sensor shines light up towards the reflectors and the resulting picture defines a 'star map', which allows the StarTracker to report the position and orientation of the studio camera to the MOOV render engine, along with zoom and focus telemetry from the lens package which allows for VR (and potentially AR) operation in realtime. The result for the British Basketball League viewers is a TV



Presenter Jeanette Kwakye MBE - Lead Analyst Ovie Soko and Studio Guest Mike Tuck in Timeline's Studio 3 at EBC.



Camera viewfinder showing the VR image in the studio at the EBC.

presentation that is absorbed in a virtual environment, allowing numerous creative opportunities and set changes at the flick of a switch.

For the studio element of the show, Timeline employs three Grass Valley cameras, with Canon UHD CJ 12:1 lenses. Two operated cameras are Grass Valley LDX-86 N heads. One camera is on a Vinten Osprey Plus pedestal with an Autoscript prompter. Another camera has an underslung prompt monitor and is mounted on the popular DollyCrane HD FloatCam, to give simple movement within the studio VR space. Camera three is a Grass Valley LDX-C86 Compact Camera, offering a locked-off VR wide shot of the set.

The British Basketball League rebrand initiative 'BE UNBEATABLE' now sees the games available on their own YouTube channel, whilst the League's partnership renewal with Sky Sports continues to bring the best of the action from the League to 'Hoop' Fans around the country. Sky Sports

will show 40 live league games, one each week during this season. These are on a Thursday or Friday evening, with anchoring from an all-new studio show. Both the Sky Sports British Basketball League show and league highlights shows are presented from the EBC at Ealing. This centralised presentation is a good example of the future of sports broadcasting.

To achieve this method of working a versatile approach to camera work is indispensable. It was self-evident when I visited the Guilford OB, that the whole technical team was efficient and proactive, they worked together to accomplish a great production from the moment they arrived on site. As the crew went off to their cameras for the live show, James gave out a cheery and resolute, "All right, have a good one, and see you on the other side".

The show started with a crescendo of excitement that then built up towards the match beginning with its traditional 'tip-off'. There was a great atmosphere in the venue,

with a family-friendly audience of all ages. Once started, the game is played at a frenetic pace. The fast-paced action is literally from end to end. The crowd was loud, on their feet, chanting, waving, and beating drums. The crew certainly needed their Peltor headphones to hear the shots being called from the remote gallery in Ealing.

With considerably fewer people travelling to the site, this remote way of working highlights the British Basketball League's obvious green sustainability credentials. James agreed and said that all the crew are very comfortable with this remote production approach. This was obvious from what I experienced on-site. A fantastic example of not just multi-skilling, but good teamwork, with everyone on the crew pitching in and helping each other out. When our game finished, the league's programming continued from Ealing with the 'tip-off' from another of the Timeline remote units, this one covering the Bristol Flyers v Newcastle Eagles that evening from the SGS College Arena in Bristol. And who won our match - It was my local team, the Surrey Scorchers, 98 to 72!

The 2023/24 British Basketball League games are available to watch across Sky Sports, Sky Sports YouTube, NOW, and on the British Basketball League YouTube channel.

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