

Imagine Communications' Platinum Router Takes Starring Role in Revitalization of BBC Studioworks' Television Centre

Customer Profile

BBC Studioworks Ltd is a commercial subsidiary of the BBC, providing world-class studios and post production services to all the major broadcasters and independent production companies – from the BBC's *EastEnders*, *Children in Need* and *Strictly Come Dancing* to E4's *Virtually Famous*, ITV's *The Chase*, ITV2's *Celebrity Juice* and Sky's *A League of Their Own*. The core of BBC Studioworks' operations is located across Elstree and Television Centre in White City, London.

Business Challenge

Following a comprehensive renovation project, Studioworks in September 2017 re-opened three studios, as well as post production facilities, at the iconic Television Centre, located in London's White City. For over 50 years, Television Centre was the home to scores of popular British television shows before being sold to property developer Stanhope plc in 2012. The redevelopment project has seen a wide-ranging overhaul of the facility, with Studioworks upgrading everything from dressing rooms and the scenic power and hoists, right through to new ventilation and building management systems. Studioworks has also been refreshing the facility's technology infrastructure.

While a greenfield technology site eliminates the burden of backward compatibility, it also lengthens and expands the evaluation process due to the need to test and stress a wide-open field of technology options. Given the industry's ongoing transition from HD to UHD, as well as the increasing prominence of IP for transporting video and audio signals, Studioworks' technical team was challenged to purchase technology for the three new studios that is optimized to meet today's demands but also capable of satisfying the video consumption appetites of at least another generation of UK television viewers. Future support for IP-based production, UHD and HDR was imperative.

Television Centre's storied broadcast history also meant that Studioworks' refurbished facilities would require meeting exacting quality and reliability standards. A robust and centralized routing architecture, specifically designed for complex and high-demand management of all video and audio signals, was a key requirement. With the wider Television Centre site now a mixed-use building that includes housing units and shops, Studioworks needed to make the most of available square footage by selecting powerful but compact equipment capable of integrating multiple functions and capabilities into a space-saving footprint. The high-volume nature of the studios at the new Television Centre also necessitated new levels of versatility, as each studio would be required to accommodate quick reconfigurations to support a variety of program types, all with different technical nuances and requirements.

Customer

- BBC Studioworks

Industry

- European broadcaster

Challenge

- Equip legendary and recently restored production studios with a new state-of-the-art technology foundation that will seamlessly evolve to meet future video consumption requirements

Products

- Platinum™ IP3 28RU router
- Platinum™ SX Pro multiviewer
- Magellan™ SDN Orchestrator control system

Business Value

- Scalable routing architecture that enables easy migration to next-gen technologies
- Robust and centralized routing architecture specifically designed for complex and high-demand management of all video and audio signals
- Dense multi-functionality reduces operational complexity and conserves precious studio space
- Centralized control system that supports both SDI and IP signal management provides seamless upgrade path to next-generation technology adoption

Technology Solution

Following an 18-month evaluation period, in which Studioworks technologists kicked the tires of a number of solutions, the company selected Imagine Communications to supply the facility's core signal routing and management infrastructure. The design of the new Studioworks facility will utilize two Platinum™ IP3 28RU router frames. One will be dedicated to Studio TC1, which will be equipped to provide both HD and UHD production capabilities. The second IP3 will handle signaling for the other two studios, TC2 and TC3, at the refurbished facility. Both routers support a mixture of copper and fibre connectivity and have interface modules to link to the facility-wide MAD1 audio infrastructure.

The Platinum IP3 router's built-in versatility was a major consideration in Studioworks' selection. In addition to its core signal distribution functionality, the Platinum IP3 supports audio multiplexing and de-multiplexing, flexible and integrated multiviewing, and discrete AES or MAD1 signals.

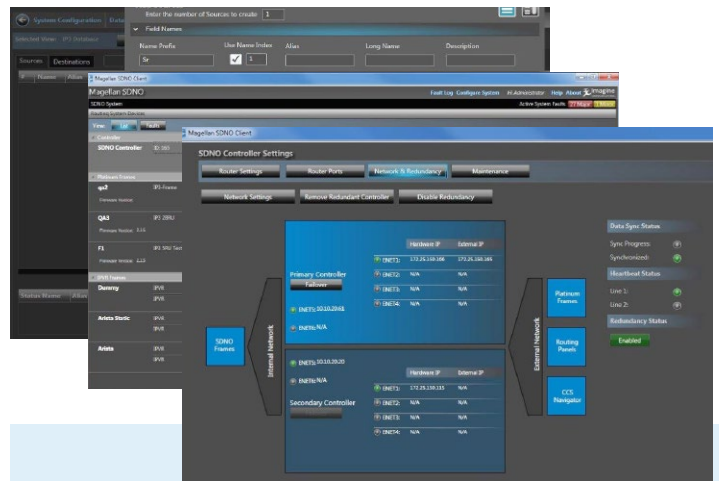
"From our technology reviews, we felt that the Platinum IP3 gave us important benefits in system design," said John Dunkley, the Television Centre Project Manager at BBC Studioworks who is leading the technology procurement. "The hybrid routing functionality eliminates the need for a separate audio matrix, and the I/O processing capabilities simplify the system architecture and increases flexibility. And the router's integrated multiviewer also simplifies overall system architecture."



The functionality of the Platinum IP3 is designed to be forward-looking and futureproof. It is anticipated that the router's support for hybrid SDI-IP workflows will provide the company with a smooth and seamless transition path from HD to UHD, HDR and, eventually, higher resolution formats – as well as put Studioworks on the path to all-IP operations. The Platinum IP3 is controlled by Imagine Communications' Magellan™ SDN Orchestrator (SDNO), a software-based control system that supports transparent operations across the two signal formats by providing

seamless and synchronous switching between SDI and IP domains. Magellan SDNO is also capable of supporting third-party solutions, providing a single control system for multivendor environments.

Looking forward, the Platinum IP3 also presents Studioworks with a variety of options for supporting IP-based workflows. The Platinum IP3 can be fortified with IP input and output modules based on the AIMS (Alliance for IP Media Solutions) roadmap to seamlessly connect to IP networks built using commercial off-the-shelf (COTS) ethernet switches. In terms of accommodating Studioworks' eclectic production requirements, the Platinum IP3 is able to save and instantly retrieve a variety of production



Imagine's Magellan SDN Orchestrator provides Studioworks with a single control system for its multivendor environment

configurations. The router's quick-change capabilities help the production house reduce the amount of time it takes to prepare each studio for new production requirements.

Business Value

Seizing the opportunity to fortify its refurbished legendary TV studios with a greenfield, state-of-the-art technology foundation, Studioworks set out on an 18-month mission to assemble the optimal infrastructure for both today's and tomorrow's television production requirements. The routing and management of signals across three separate studios was of tantamount importance to Studioworks, which required a solution that would reduce complexity and conserve precious facility space by integrating multiple capabilities into a compact footprint. The Imagine Communications Platinum IP3 was selected due to its expected reliability, ability to handle both video and audio routing requirements and the integration of a multiviewer and other capabilities that often eat up additional rack space as standalone systems.

It is also anticipated that the router's suitability for both SDI and SDI-IP hybrid environments will provide Studioworks with a seamless and affordable path to the adoption of next-generation technologies, ensuring that the company is able to meet the exacting requirements of production companies and broadcasters for the foreseeable future. Similarly, simultaneous support for HD and UHD and the ability to quickly toggle between the two, positions users of this technology to pursue a transition path to higher resolution services.

Through its collaboration with suppliers such as Imagine Communications and Dega Broadcast Systems, the UK-based systems integrator overseeing the technology restoration of Television Centre, Studioworks is now equipped with one of the most up-to-date, futureproof and flexible studio spaces in the UK.