



VSC Design

Deliver BBC World Service TV's Studio K

November 2016, the UK Government announced funding of £85m a year to the BBC to extend the reach of BBC World Service TV abroad and VSC Design Ltd were delighted to be awarded the contract to deliver the infrastructure changes required at New Broadcasting House, London W1A



Nature and Scope of the Contract

VSC successfully won the competitive tender as part of the global BBC World 2020 project that boosts the number of languages broadcast by BBC World Service Television and Radio. The tender comprised the installation of a new 4 camera fully automated on-air studio and all of the necessary central areas infrastructure changes to support the new studio.

Project Description

The latest studio to be built at the BBC's W1 New Broadcasting House is Studio K. It maintains the functionality of the BBC's large studios yet rationalises the operation into one that can run with a full crew or just with 1 or 2 operators. Key to the functionality is the comprehensive touchscreen accessible Mosart automation that controls the vision mixer, audio mixer, robotic cameras and the lighting. Resilience could not be compromised nor could the end user experience. Using the latest KVM systems combined with the mini form factor PC's gave a space saving and power saving edge to the design. The studio integrates to the building wide talkback and routing infrastructure, as well as the complex networking requirements.

Strict technical guidelines issued by the BBC, for example lip sync being no more than 20ms variant on the output,

meant extra care had to be taken to keep the design true to the W1A principles in order to produce an output as expected from one of the world's premier broadcasters.

Multi Language

Studio K is a multi language capable studio. Attention had to be taken to ensure the agnostic environment worked right the way through the system, even down to ensuring the keyboards could be easily changed on a daily/hourly basis. Ergonomics of the production gallery lead the design expectations and detailed 3D renders combined with physical mock ups ensured the "buy in" from all parties, both production based and engineering based.

Design, Installation, Commissioning, Documentation & Acceptance

VSC were responsible for all aspects of this delivery. The first stage in the project was to produce a high level design and budget for the BBC. This was analysed by the various subject matter experts and operational staff and a consensus design was produced in the form of a high level block diagram which formed the HLD. VSC has worked closely with the specialist support teams at BBC NBH to produce a harmonised set of drawing standards to encompass the various drawing forms used by the many SIs who have worked on projects over the past 10 years. These standards are now used for new installations at NBH. Equipment was supplied, configured, installed and tested by us. This included the highly complex integration into the Mosart automation system at NBH. This included PAT safety testing of all items, BBC Assets tagging and entering on the master BBC asset register. Hand-over documentation was then passed to the BBC at the successful completion of the project. This information included all equipment asset and safety test results, along with commissioning tests and performance results. Health & safety was managed following our ISO 9001:2015 operating procedures. All activities were carried out within the BBC's permit to work system.

We liaised with the Civil Works to put up the primary monitor wall structure during the first fix and our cross platform 3D design skills made sure the technical furniture around it integrated with the vendor's design of the desk in 3D to produce the all important operational eye line views.

Live Environment

Our team are extremely experienced in working within a live "on-air" environment such as the one presented within Studio K. This experience, together with the careful planning ensured that there was no impact to programme output throughout the install. VSC worked closely with the BBC's project manager to ensure that the programme of delivery was delivered within the project deadlines. On review of this project the BBC decided to use the design implemented by VSC as a template and VSC have now implemented this design in Studio L at NBH.

"Working in a live broadcast environment is where VSC flourishes, Studio K was an exciting and prestigious project"

John Hartz, Projects Director, VSC Design



Systems Integration - Project Management - Technical Support

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