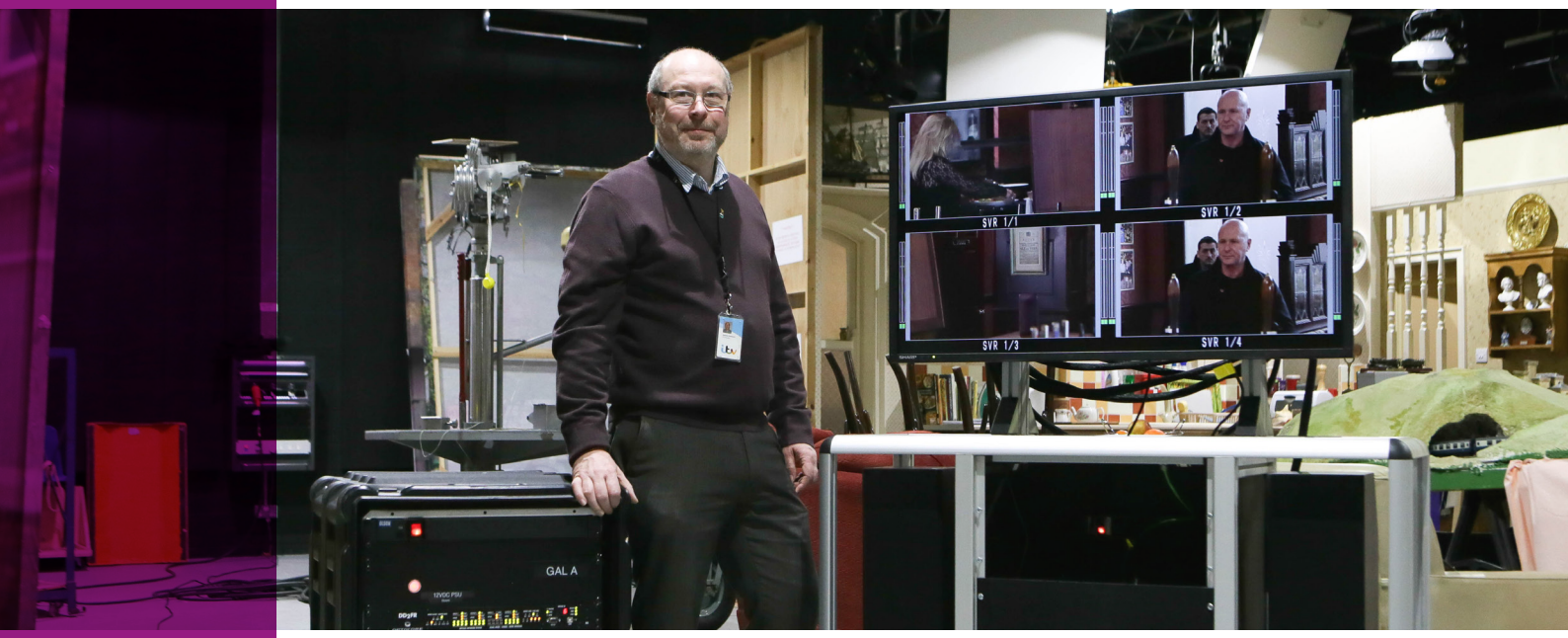
Case Study
Installation



ITV Coronation Street, Manchester, UK

THE SET

The relocation of the famous ITV *Coronation Street* lot, from Manchester's Quay Street Studios to the 7.7 acre studio and production facility on the Trafford side of MediaCityUK, has brought with it a significant streamlining of signal flexibility, with BroaMan and Optocore fibre distribution devices playing a major role in the new automation system.

Set in a fictional town in the north of England, what has become the world's longest-running television soap opera is a British 'institution', having first been broadcast back in December 1960.

A unique, fully integrated transport solution was conceived by the show's Technical Manager, Stan Robinson, in conjunction with project engineers Phil Cooper and Nigel Fowler from system integrators TSL. The design was based on meeting all *Coronation Street* workflow and system requirements.

Earlier, AVC Electronics, who had worked on the previous Coronation Street HD upgrade at the old studios, had been appointed broadcast consultants for the project, and their lead consultant Raz Khan had carried out technical evaluation and system configuration of all equipment to meet these requirements. Installation, testing and commissioning was then undertaken by TSL, the successful bidders, after the BroaMan and Optocore solution had been adopted.

SYSTEM REQUIREMENTS

- Simultaneous transport of video, audio, intercom and data over fiber
- Full production flexibility
- Connection of multiple studios and MCRs with one routing system
- Compatibility with different audio consoles
- Mobile stageboxes with automatic routing – video, audio, intercom and data follow stagebox automatically
- Simplified control and maintenance

"The key benefit of this stagebox system is reduction of set-up times. With the exception of the cameras, all other crew equipment can be connected with local cables to a stagebox; so by plugging in one fibre cable they can start using it."

Phil Cooper, Project Engineer, TSL

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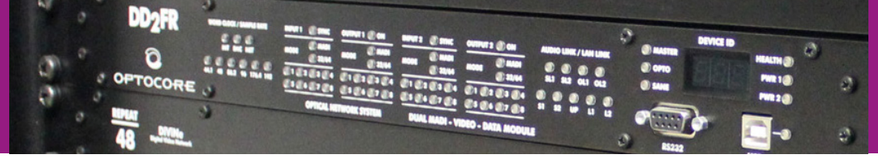


SOLUTION

BroaMan and Optocore architecture forms the beating heart of the new broadcast network which has been constructed around ten BroaMan Route66 interfaces and two WDM frames. These combine to create one centralised router, feeding the ForA 96 x 128 matrix distribution unit, and forming part of the identification, CWDM and control to the Optocore router.

In addition to video, ITV can also route data and audio automatically since the stageboxes are a multi-faculty resource, which make connectivity available on set, whether in the studios, out on the lot or on location. This includes: Audio sources (boom mics) and monitoring returns; SDI monitoring and sources (from portable cameras or recorder playback); 4wire talkback circuits for boom operators and assistant directors; Router control panels to control SDI monitoring.

There are five production control areas – comprising galleries and OB vans, each with a corresponding stagebox, incorporating Optocore DD2FR-FX and BroaMan Repeat48WDM rack devices. Having specified a Studer Vista 1 and D21m I/O interface in the two main galleries TSL deployed ten Optocore DD2FR-FX devices to transport native MADI over the fibre network.

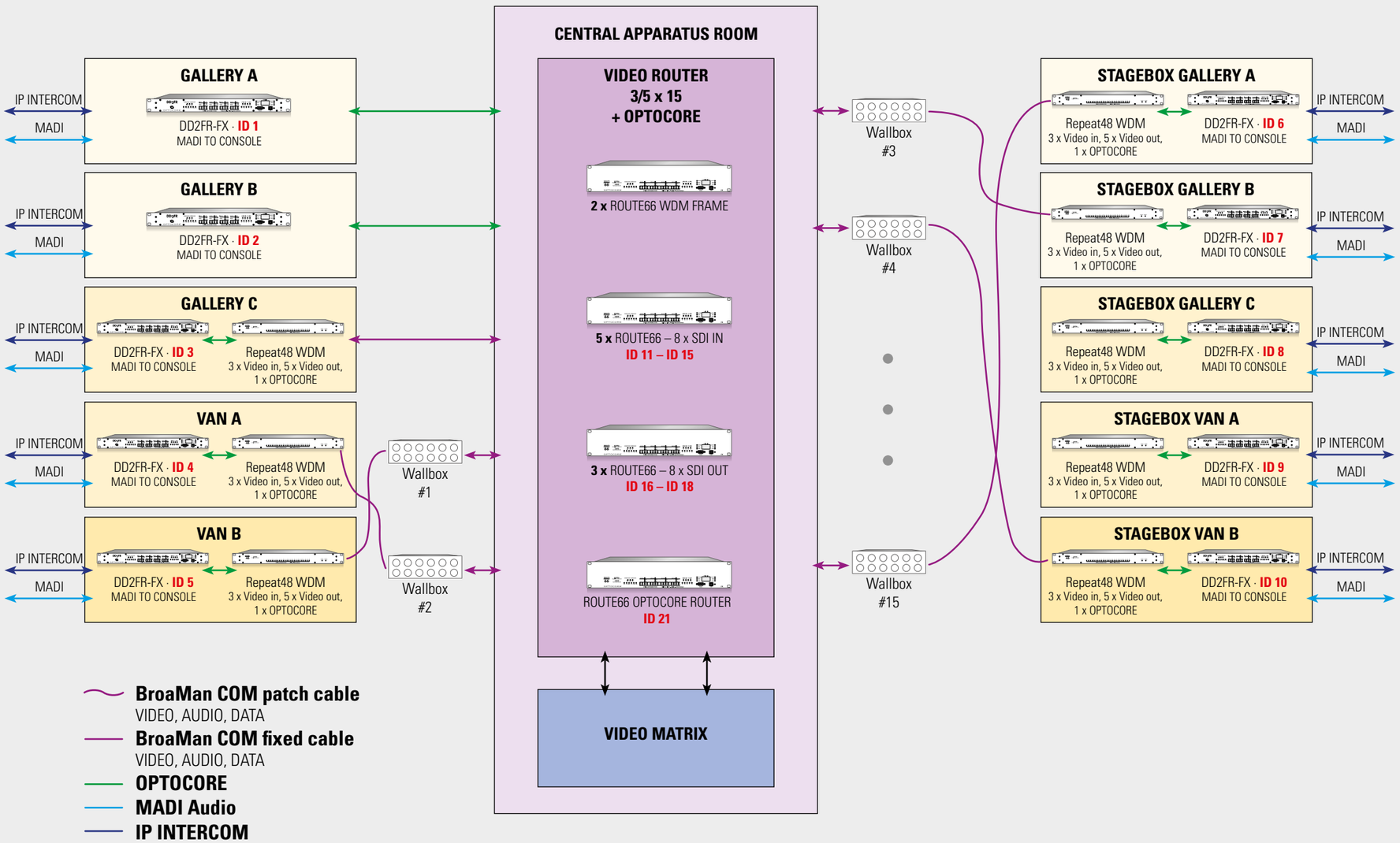
Instead of having dedicated BroaMan sockets dotted around the site TSL also noted that by using hybrid camera fibre cables they could have every BroaMan point active through the site – simply by patching into the SMPTE 311M network. There are 100 camera points supplying two patch systems – one in the main building and one out on the lot, enabling patching to either Camera Base Stations or the BroaMan Router.

The path is configured from the 15 connection points available from the BroaMan system, with distribution to the portable stageboxes via the same SMPTE fibre infrastructure as the camera. Each gallery or van has a corresponding stagebox which can be connected to the core routing system (via a wallbox) or taken on location and connected (point to point) to a van – again, using standard camera floor cables.

Wherever the mobile stagebox is connected, the router will recognise the location and automatically patch the signal between stagebox and control room.

This elegant solution is a far cry from the traditional routine of connecting many long individual cables to the nearest studio wallbox and then patching every mic signal, audio return, talkback, video and control signal to the relevant gallery or van.

ITV CORONATION STREET
BROAMAN SYSTEM BLOCK DIAGRAM



KEY ADVANTAGES

- Low latency fiber optic solution for all type of signals – video, audio and Ethernet
- Fully automatic routing solution with plug and play stageboxes – quick and simple setup
- 15 connection points for 5 mobile stageboxes
- Each stagebox equipped with 3 Video IN, 5 Video OUT, 2 fiber MADI ports, 4 LAN ports
- Each stagebox connected via single duplex SMPTE fiber – no extra studio cables needed
- Native protocol transport for Studer – gain and phantom control
- Easy to use Opocore Control Software for level monitoring

"We are delighted with BroaMan and Optocore solution, which has offered us an incredibly flexible solution."

Stan Robinson, Technical Manager, ITV Coronation Street

Case Study Installation
ITV Coronation Street, Manchester, UK

MOBILE STAGEBOXES COMPONENTS

OPTOCORE/ BROAMAN Device	ID Number	Location	Functions
DD2FR-FX	6	STAGEBOX GAL A	Interface for audio console – MADI, WORD CLOCK
REPEAT48 WDM	—	STAGEBOX GAL A	Intercom connection via LAN
DD2FR-FX	7	STAGEBOX GAL B	3 × VIDEO IN , 5 × Video OUT, 2 × LINK FOR OPTOCORE
REPEAT48 WDM	—	STAGEBOX GAL B	Interface for audio console – MADI, WORD CLOCK
DD2FR-FX	8	STAGEBOX GAL C	Intercom connection via LAN
REPEAT48 WDM	—	STAGEBOX GAL C	3 × VIDEO IN , 5 × Video OUT, 2 × LINK FOR OPTOCORE
DD2FR-FX	9	STAGEBOX VAN A	Interface for audio console – MADI, WORD CLOCK
REPEAT48 WDM	—	STAGEBOX VAN A	Intercom connection via LAN
DD2FR-FX	10	STAGEBOX VAN B	3 × VIDEO IN , 5 × Video OUT, 2 × LINK FOR OPTOCORE
REPEAT48 WDM	—	STAGEBOX VAN B	Interface for audio console – MADI, WORD CLOCK
DD2FR-FX	1	GAL A	Intercom connection via LAN
DD2FR-FX	2	GAL B	3 × VIDEO IN , 5 × Video OUT, 2 × LINK FOR OPTOCORE
DD2FR-FX	3	GAL C	Interface for audio console – MADI, WORD CLOCK
REPEAT48 WDM	—	GAL C	Intercom connection via LAN
DD2FR-FX	4	VAN A	3 × VIDEO IN , 5 × Video OUT, 2 × LINK FOR OPTOCORE
REPEAT48 WDM	—	VAN A	Interface for audio console – MADI, WORD CLOCK,
DD2FR-FX	5	VAN B	Intercom connection via LAN
REPEAT48 WDM	—	VAN B	Interface for audio console – MADI, WORD CLOCK

ROUTING SYSTEM COMPONENTS

BROAMAN Device	ID Number	Location	Functions	
ROUTE66	11	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Channel 1 to Locations 1-8
ROUTE66	12	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Channel 2 to Locations 1-8
ROUTE66	13	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Channel 3 to Locations 1-8
ROUTE66	14	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Channel 4 to Locations 1-8
ROUTE66	15	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Channel 5 to Locations 1-8
ROUTE66	16	CAR	8 × 3G-SDI OUT 15 × Fiber RX Ethernet Module	VIDEO ROUTER Return Channel 1 from Locations 1-8
ROUTE66	17	CAR	8 × 3G-SDI IN 15 × Fiber TX Ethernet Module	VIDEO ROUTER Return Channel 2 from Locations 1-8
ROUTE66	18	CAR	8 × 3G-SDI IN 15 × Fiber TX Optocore Module	VIDEO ROUTER Return Channel 3 from Locations 1-8
ROUTE66	21	CAR	18 × fiberTRX Ethernet Module	VIDEO ROUTER Optocore Router
WDM FRAME	—	CAR	6 + 1 MUX Simplex	VIDEO ROUTER MUX, COM PORTS 1-15
WDM FRAME	—	CAR	4 + 1 DEMUX Simplex	VIDEO ROUTER MUX, COM PORTS 1-15

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