

# How Do You Relocate A Live Transmission Company?

**Relocating a transmission facility who operate 24/7 is a complex operation. Quite often channels are on-air constantly with little opportunity to switch to a backup service. You can't simply dismantle the facility, relocate, and rebuild it.**

You can't even pre-wire a new facility and move all of the equipment over a long weekend, as you can with some post production facilities. So what do you do, mirror the entire facility? Maybe.

Mike Watson, Technical Director of Absolute CAD, was approached by Pacific Television Center, a Los Angeles-based, global transmission and production company, to help migrate their 24/7 TX facility from Aldgate to Clerkenwell, London. Having originally designed the London facility in 2004, Absolute CAD were appointed to relocate the TX facility, which would take 12 months to plan and nine months to implement.

Mirroring a facility is not a cost effective solution as we have learned from disaster and recovery scenarios, duplicating every piece of equipment in the backup location. Pacific Television provide high levels of redundancy for their clients, with Main & Backup transmission chains, as well as diverse paths between sites. This level of redundancy negated the need to duplicate everything, making the move more cost effective, and allowing services to be moved without any loss of service to the TX channels. But how was it implemented?

The new location was pre-wired to match the existing circuits of the existing facility. Some key items had to be purchased for a successful migration, namely an NVISION 8576 router, which directs the HDSDI/ASI feeds, as well as an Evertz ATP (Advanced Optical Transport Protocol) enabling multiplexed ASI streams to be transmitted down a dedicated fibre link. Once these were installed, a temporary direct dark fibre was deployed between the sites.



Fibre encoders and decoders enabled the two baseband routers to be connected together providing a crucial ASI/SDI tie-lines between the facilities.

The migration schedule was masterminded by Pacific's Jakob Nielsen and Mike Finley and was absolutely clinical. The first phase was to migrate Backup chains for a few services and attach them

to the new ATP frames, leaving the Main feeds live in the old facility. The Main and Backup circuits, once live, would be swapped on the ATP platform, allowing the Main circuits to now be live in the new facility. Finally, the Backup circuits were migrated over. This repeated exchange of Main and Backup circuits enabled hundreds of services to be migrated with very little disruption to on air presence. At times services were being decoded in Aldgate, sent via the dark fibre tie-lines to the router in Clerkenwell where they encoded and transmitted. The migration plan was both meticulous and laborious, lasting four weeks, at the end of which Pacific Television were able to relocate all of their TX chains using existing equipment.

"We installed over 33km of cabling for the new facility," Mike Watson, Absolute CAD explained, "which included 2 camera studios, 25 equipment racks, and a Master Control Room."

Mike continued: "When the go button was pressed there was no turning back. It was both terrifying and exhilarating."

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