



# IP IN ACTION

## REPRESENTATIVE INSTALLATIONS



**ARENA**



**OB X, OB Y, OB Z, OB 12 UHD OB TRUCKS**  
based in Surrey, UK

**DESCRIPTION**  
4 Full IP UHD OB Trucks  
32 UHD Cameras each  
Used by BT Sport for English Premier League coverage  
Used by SKY Sports for Rugby Union coverage

**IP TECHNOLOGY**  
SMPTTE ST 2022-6  
SMPTTE ST 2110

**IP BENEFITS**  
Format Flexibility (UHD/HD)  
Scale

**ON AIR DATE**  
September, 2016

**AP**

**ASSOCIATED PRESS**  
New York, USA

**DESCRIPTION**  
New headquarters building, with hybrid HD-SDIP infrastructure for studios, newsroom and MCR

**IP TECHNOLOGY**  
SMPTTE ST 2022-6  
SMPTTE ST 2022-7

**IP BENEFITS**  
Ease of expansion  
Test case opportunity  
Long cable runs

**ON AIR DATE**  
March, 2017

**BBC cymru wales**



**BBC WALES, CENTRAL SQUARE**  
Cardiff, Wales, UK

**DESCRIPTION**  
New Headquarters Building  
3 TV Studios  
Multiple Radio Studios  
Multiple Edit Suites  
Flexible Media Areas

**IP TECHNOLOGY**  
SMPTTE ST 2110  
AMWA NMOS

**IP BENEFITS**  
Future Proofing  
Scale  
Format Flexibility

**ON AIR DATE**  
Q4 2019

**bce**  
broadcasting center europe

**BROADCASTING CENTER EUROPE**  
LUXEMBOURG

**DESCRIPTION**  
Move to new premises: RTL City  
IP used for signal routing and distribution

**IP TECHNOLOGY**  
SMPTTE 2022-7  
AES67  
PTPv2 and PTPv1  
Upgradable to SMPTTE ST 2110

**IP BENEFITS**  
Formal Aesthetic (1080p, 4K)  
Flexibility, Redundancy, Reliability  
Innovation

**ON AIR DATE**  
April, 2017 (Studio Production)  
June, 2017 (Playback Facility)

**CCTV**

**CCTV**  
BEIJING, CHINA

**DESCRIPTION**  
Outdoor mobile MCR system for hybrid IP routing, monitoring and control

**IP TECHNOLOGY**  
SMPTTE ST 2110 for HD+UHD  
SMPTTE ST 2022-7

**IP BENEFITS**  
Flexibility and agility  
Open, interoperable  
Scalable, future-proof  
Space-saving

**ON AIR DATE**  
February, 2018

**CNN**



**CNN**  
New York, NY

**DESCRIPTION**  
New York City headquarters for CNN global news production. Connectivity to other CNN facilities over IP-based WAN.

**IP TECHNOLOGY**  
SMPTTE ST 2110  
SMPTTE ST 2059  
SMPTTE ST 2022-7  
SMPTTE ST 2022-8

**IP BENEFITS**  
Significant reduction of rack space. Minimal coax cabling. Flexibility to change and grow dynamically.

**ON AIR DATE**  
Q2-2019

**FOX SPORTS**



**THE WOODLANDS**  
FOX SPORTS  
THE WOODLANDS, TX, USA

**DESCRIPTION**  
Standards-based, hybrid/IP routing and control for broadcast production environment

**IP TECHNOLOGY**  
SMPTTE ST 2110

**IP BENEFITS**  
Flexible routing ecosystem  
Open, interoperable  
Highly scalable  
Seamlessly incorporates new technologies

**ON AIR DATE**  
April, 2018

**FOX NETWORKS**



**FOX NETWORKS**  
LOS ANGELES, CA, USA


**DESCRIPTION**  
FOX Network Center Los Angeles Video Routing

**IP TECHNOLOGY**  
SMPTTE ST 2110  
SMPTTE ST 2059

**IP BENEFITS**  
Enhanced routing density  
Reducing coax cabling with fewer fibers  
Expanded & flexible audio & ANC data flows  
Easier multi-format video

**ON AIR DATE**  
April, 2018

**GLOBOSAT**



**GLOBOSAT**  
Rio de Janeiro, BRASIL


**DESCRIPTION**  
Live production including graphics and video playback over IP

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67  
SMPTTE ST 2059

**IP BENEFITS**  
Massive AV signals transport  
Signals utilization flexibility

**ON AIR DATE**  
July, 2016

**GLOBOSAT**



**GLOBOSAT**  
Rio de Janeiro, BRASIL


**DESCRIPTION**  
IP based compact production galleries

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67  
SMPTTE ST 2059

**IP BENEFITS**  
Simple operation for live events with few external sources.  
Signals utilization flexibility

**ON AIR DATE**  
March, 2018

**HUIAROU RADIO**



**HUIAROU RADIO**  
Huairou, China


**DESCRIPTION**  
Master control system project for signal transmission, monitor and auto switch in the emergency situation  
distributor based on AES67

**IP TECHNOLOGY**  
SMPTTE ST 2110  
AES67

**IP BENEFITS**  
Ease of signal monitor and control;  
Interoperability;  
Low latency.

**ON AIR DATE**  
July, 2016

**HUZHOU RADIO**



**HUZHOU RADIO**  
Huzhou, China


**DESCRIPTION**  
Master control system project provides signal monitor and control functions for 4 live channels, 10 satellite channels

**IP TECHNOLOGY**  
SMPTTE ST 2110  
AES67

**IP BENEFITS**  
High efficiency in signal monitor and control  
Improved security with network redundancy  
Ease of installation and maintenance

**ON AIR DATE**  
July, 2016

**KBS Media**



**KOREAN BROADCASTING SYSTEM**  
Seoul, Korea


**DESCRIPTION**  
2 UHD studios and 2 signal control rooms (SCR) in the KBS new building. Each SCR backup each others and able to control both studios.

**IP TECHNOLOGY**  
SMPTTE ST 2110 & AES67

**IP BENEFITS**  
Scale  
Interconnectivity between Studios

**ON AIR DATE**  
February, 2018

**Linked in**



**LINKED IN MULTI-CAMPUS PRODUCTION**  
San Francisco/Mountain View/Bangalore/Dublin/Chicago/New York

**DESCRIPTION**  
Multiple production facilities which are interoperable, remotely managed and controlled. Control room which can produce shows from various venues

**IP TECHNOLOGY**  
SMPTTE ST 2110 (currently)  
SMPTTE ST 2110 / AES67 (2018)  
SMPTTE ST 2059 (2018)

**IP BENEFITS**  
Long-term infrastructure  
Format Flexibility

**ON AIR DATE**  
June, 2016 - 2018 (various)

**LIANYUNGANG RADIO**



**LIANYUNGANG RADIO**  
Luoyang, China


**DESCRIPTION**  
Master control system project for secured transmission for 7 channels

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67

**IP BENEFITS**  
High efficiency of signal monitor and control;  
Improved security with network redundancy;  
Low latency

**ON AIR DATE**  
September, 2017

**LUOYANG RADIO**



**LUOYANG RADIO**  
Luoyang, China


**DESCRIPTION**  
Master control system integration project for the master control room, live room and director room construction for 5 live channels' monitor and control

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67

**IP BENEFITS**  
Ease of signal monitor and control;  
Improved security with network redundancy;  
Low latency

**ON AIR DATE**  
February, 2016

**Microsoft Production Studios**



**MICROSOFT PRODUCTION STUDIOS**  
Redmond, WA, USA


**DESCRIPTION**  
Secure, Flexible Facility: Broadcast News Interviews, Live Event Streaming w/ 12-Language Translation, Product Launches, Training Videos, Live Music Recording and more.

**IP TECHNOLOGY**  
SMPTTE ST 2110  
SMPTTE ST 2110-30

**IP BENEFITS**  
Common CAT6/fiber can be repurposed at will. Content can be shared between audio and video teams freely.

**ON AIR DATE**  
2019

**NBCUniversal Owned Television Stations**



**WCAG & WWSI**  
Comcast Technology Center Philadelphia, PA, USA


**DESCRIPTION**  
New IP 3000 IP facility housed in Comcast's new flagship technology center Full IP core infrastructure

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67  
SMPTTE ST 2059  
AMWA NMOS IS-04

**IP BENEFITS**  
Format Flexibility  
Resource Sharing  
Easy local and remote expansion/scaling

**ON AIR DATE**  
2018

**NDR**



**NDR ELBPHILHARMONIE**  
Hamburg, Germany

**DESCRIPTION**  
Fully networked concert hall  
6 mixing desks  
15 stagebox units  
1 main router  
4000+ audio channels

**IP TECHNOLOGY**  
AES67

**IP BENEFITS**  
Flexible signal management  
Shared infrastructure  
Integrated access rights management

**ON AIR DATE**  
January, 2017

**NEP**



**NEP BROADCAST SOLUTIONS**  
Singapore


**DESCRIPTION**  
Flyway OB kits for Live Production for major sport event coverage.

**IP TECHNOLOGY**  
SMPTTE ST 2022-6

**IP BENEFITS**  
Scale  
Flexibility

**ON AIR DATE**  
March, 2017

**NEP**



**CLOUD PRODUCTION PLATFORM**  
The Netherlands


**DESCRIPTION**  
Centralized, shared production platform enabling productions across multiple locations

**IP TECHNOLOGY**  
SMPTTE ST 2022-6

**IP BENEFITS**  
Better Equipment Utilization  
Reduced Travel Budget  
Flexibility

**ON AIR DATE**  
November, 2015

**NEP**



**THE HUB**  
Sydney and Melbourne, Australia

**DESCRIPTION**  
Two, centralized and resource sharing production centres, allowing for remote production from 29 country wide venues

**IP TECHNOLOGY**  
SMPTTE ST 2110

**IP BENEFITS**  
Resource sharing  
Reduced Travel Budget  
Flexibility  
Anyone Anywhere on the network

**ON AIR DATE**  
March, 2018

**ND**



**NOTRE DAME UNIVERSITY**  
South Bend, Indiana, USA

**DESCRIPTION**  
Notre Dame Studios is a brand new 18,000 sq. foot state-of-the-art production facility. Notre Dame Studios will enable campus video production units to realize their creative vision for live and recorded story-telling

**IP TECHNOLOGY**  
AES67

**IP BENEFITS**  
State-of-the-art production facility  
Flexible workflow to meet varied use  
Future proofed infrastructure

**ON AIR DATE**  
Fall 2017

**now TV**



**PCCW NEWS NEWS**  
Hong Kong, China


**DESCRIPTION**  
IP infrastructure for 24 hours Live News Production

**IP TECHNOLOGY**  
SMPTTE ST 2022-6 & AES67

**IP BENEFITS**  
Scale  
Flexibility

**ON AIR DATE**  
August, 2018

**QVC**



**QVC**  
OBPA CITY, JAPAN


**DESCRIPTION**  
IP-based production system, including IP routing system, multiviewers, production switcher, and audio mixer

**IP TECHNOLOGY**  
SMPTTE ST 2110

**IP BENEFITS**  
Flexibility and agility  
Open, interoperable  
Highly scalable

**ON AIR DATE**  
2018

**RBC**



**BEIJING RADIO**  
Beijing, China


**DESCRIPTION**  
Master control system integration project for 11 live channels' monitor and control with ADIP devices from different manufacturers

**IP TECHNOLOGY**  
AES67

**IP BENEFITS**  
Ease of signal monitor and control;  
Improved security with network redundancy;  
Interoperability

**ON AIR DATE**  
April, 2017

**RU TV**



**RU TV**  
Moscow, Russia


**DESCRIPTION**  
Russian Media Group initially built 5 radio studios using AoIP technology. Later adding TV studios by simply extending the IP system infrastructure

**IP TECHNOLOGY**  
AES67

**IP BENEFITS**  
Greater operational flexibility  
Enhanced production workflow  
Future proofed infrastructure

**ON AIR DATE**  
2013

**91.0**



**RUJIAN RADIO**  
Rujian, China


**DESCRIPTION**  
Master control system project for signal transmission, monitor and auto switch in the emergency situation for 2 channels (1 backup) with AES67 devices

**IP TECHNOLOGY**  
AES67

**IP BENEFITS**  
High efficiency of signal monitor and control;  
Improved security with network redundancy;  
Low latency

**ON AIR DATE**  
June, 2017

**sky**



**SKY**  
Milan, Italy


**DESCRIPTION**  
Large-scale audio/video routing system in a hybrid SDIP environment

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7

**IP BENEFITS**  
Flexible routing ecosystem  
Open, interoperable  
Highly scalable

**ON AIR DATE**  
February, 2017

**SMG**



**SHANGHAI MEDIA GROUP**  
Shanghai, China

**DESCRIPTION**  
UHD OB track

**IP TECHNOLOGY**  
SMPTTE ST 2110 & AES67

**IP BENEFITS**  
Scale  
Flexibility

**ON AIR DATE**  
May, 2018

**腾讯视频**



**TENCENT VIDEO**  
Beijing, China

**DESCRIPTION**  
Full IP 4K UHD OB Van

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7, T100

**IP BENEFITS**  
Scale  
Scalability  
Flexibility

**ON AIR DATE**  
December, 2016

**Broadcast Anywhere Timeline**



**TIMELINE**  
London, UK


**DESCRIPTION**  
Timeline's triple expanding IP 4K HDR outside broadcast truck delivers large scale complex OBs simultaneously in uncompressed 4K UHD HDR and 4K UHD SDR

**IP TECHNOLOGY**  
SMPTTE ST 2110, ST 2022-6, ST 2022-7 and ST 2059

**IP BENEFITS**  
Enables large scale complex OB's  
Removes traditional SDI matrix limitations

**ON AIR DATE**  
May, 2017

**TPC**



**TPC**  
Zurich, Switzerland


**DESCRIPTION**  
Standards-based, uncompressed, IP-UHD mobile production truck  
New technology building (incl. Master Switching)

**IP TECHNOLOGY**  
SMPTTE ST 2110  
AES67

**IP BENEFITS**  
Open architecture, Compact and flexible,  
Seamlessly incorporates new technologies,  
Future proofed

**ON AIR DATE**  
August 2018

**TV GLOBO RECIFE**



**TV GLOBO RECIFE**  
RECIFE, BRAZIL


**DESCRIPTION**  
Uncompressed IP-based routing system and multiviewers for live, studio and news production

**IP TECHNOLOGY**  
SMPTTE ST 2022-6/7  
AES67  
VSP TR-04

**IP BENEFITS**  
Flexible routing ecosystem  
Open, interoperable  
Highly scalable

**ON AIR DATE**  
January, 2018

**TV2**



**TV2**  
Bergen and Oslo, Norway


**DESCRIPTION**  
Convergent IP LAN/WAN, software defined network (SDN) that enables distributed production across two new facilities in Bergen and Oslo (approximately 280 miles apart)

**IP TECHNOLOGY**  
SMPTTE ST 2022-6 + AES67 + PTP initially  
SMPTTE ST 2110 (planned H2 2018)  
SDN

**IP BENEFITS**  
Enables resources (talent, equipment and studios/control rooms) to be shared within and across sites  
Can evolve and grow to meet changing needs

**ON AIR DATE**  
September, 2017 (Bergen)

**VICE**



**VICE**  
Brooklyn, NY, USA

**DESCRIPTION**  
IP-based production system, including IP routing system, multiviewers, production switcher, and audio mixer

**IP TECHNOLOGY**  
SMPTTE ST 2022-6  
AES67  
SMPTTE ST 2059

**IP BENEFITS**  
Completely distributed facility  
Flexible to future needs  
Separate video/audio routing  
Best-of-breed products connected via IP standards

**ON AIR DATE**  
December, 2016