

SMPTE 2110 for engineers

A 1 day training course



Description

This course studies the new SMPTE ST 2110 suite of standards. The course covers all parts of the standard from SMPTE ST 2110-10 through to SMPTE ST 2110-50. The course begins with an introduction to all IP studios and separating video and audio streams, then moves on to PTP and synchronisation. Video encapsulation is then followed by audio encapsulation. Handling ancillary data finishes the course.



Key outcomes

By the end of the course delegates will be able to:

- ✓ Recognise the benefits of SMPTE ST 2110.
- ✓ Describe SMPTE ST 2110.
- ✓ Explain how the SMPTE 2110 standards work.
- ✓ Compare and contrast SMPTE 2110 and SMPTE 2022.



Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning.



Details

Who will benefit?

Anyone working in broadcast.

Prerequisites

IP broadcast fundamentals

Duration: 1 day

Customer rating:

NEW COURSE!

Generic training



Generic training compliments product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".

"Friendly environment with expert teaching that teaches the why before the how."
G.C. Fasthosts

Small class sizes



We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.

"Excellent course. The small class size was a great benefit..."
M.B. IBM

Hands On training



The majority of our courses use hands on sessions to reinforce the theory.

"Not many courses have practice added to it. Normally just the theoretical stuff is covered."
J.W. Vodafone

Our courseware



We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.

"Comprehensive materials that made the course easy to follow and will be used as a reference point."
V.B. Rockwell Collins

Customise your course



Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.

"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."
S.R. Qinetiq

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Course content

Introduction

The all IP studio.
Review of IP and RTP.
Role of SMPTE,
SMPTE 2022,
What is SMPTE 2110,
SMPTE 2022 versus 2110,
SMPTE 2110 parts,
multiplex standards,
2110 separate streams,
Video,
Audio,
ANC.
Essences.

Uncompressed video

SMPTE 2110-20,
2110-21.
Image support,
raster sizes,
bit depth,
active video and no blanking,
bandwidth and bandwidth savings,
pgroups.
Timestamps.
Packing modes.
Packet sizes,
pixels per packet.

Separate streams and synchronisation

The old way,
blackburst,
time code,
DARS.
SMPTE 2110-10,
ST2059,
PTP,
PTP architecture,
PTP accuracy,
How PTP works,
Offset and delay
PTP clock types,
Hardware time stamping
SDP.
Hybrids.

Audio

SMPTE 2110-30,
2110-31,
PCM,
AES3.
Allowed versus required.
Channels and streams.

Ancillary data

SMPTE 2110-40,
RFC on RTP payloads for ST 291 ancillary data.

