# SMPTE ST 2110 FUNDAMENTALS

WHAT IS IT?

SMPTE ST 2110 is a groundbreaking suite of standards for IP transport in media workflows. Designed to break apart video, audio and ancillary data into separate streams, ST 2110 enables truly flexible IP-based workflows for real-time production, playout and other professional media applications.

With ST 2110, manufacturers can create products that work together seamlessly and ensure the interoperability that media companies need to make a smooth transition from SDI to IP.

THE SMPTE ST 2110 SUITE
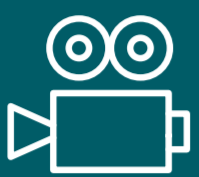
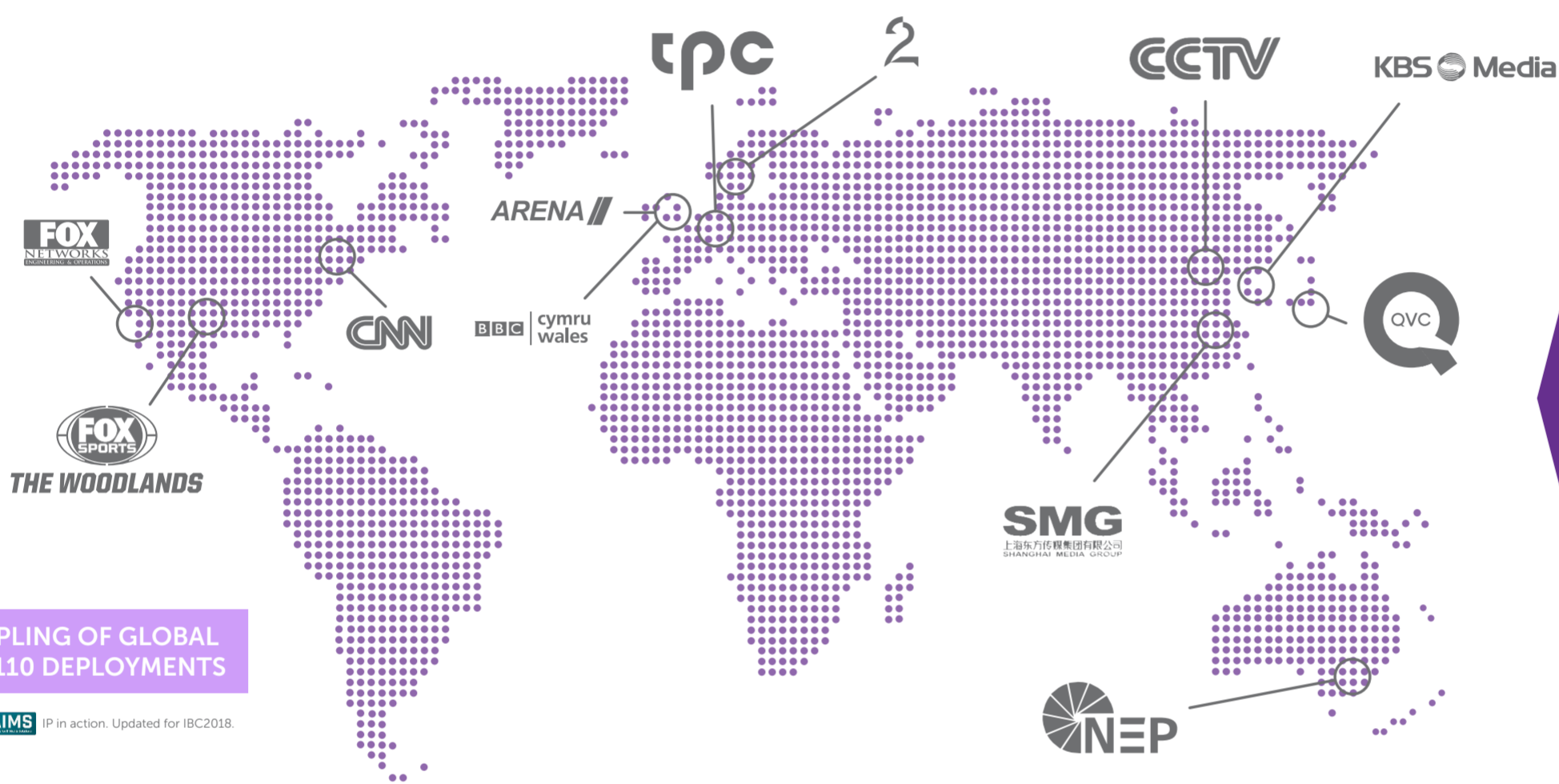| 2110 for Video (ST 2110-20/21)	2110 for Audio (ST 2110-30/31)	2110 for Ancillary Data (ST 2110-40)	2110 for System Timing (ST 2110-10)
Transports uncompressed video and prevents high-bitrate video streams from causing congestion in IP network "pipes"	Transports uncompressed PCM and compressed AES3 audio over IP networks	Transports uncompressed PCM and compressed/ uncompressed AES3 audio over IP networks	Synchronizes multiple media types at any point along the broadcast chain

REAL-WORLD ROLLOUT

tpc
CCTV
KBS Media
ARENA
FOX NETWORKS
CNN
BBC cymru wales
QVC
FOX SPORTS
THE WOODLANDS
SMG 上海文化廣播影視集團公司
NEP

SAMPLING OF GLOBAL ST 2110 DEPLOYMENTS

3. Source: AIMS IP in action. Updated for IBC2018.

200+ installations

have been successfully deployed using SMPTE ST 2110 and its predecessor, SMPTE ST 2022-6[1]

BUSINESS BENEFITS

Flexible Workflows
Route and work on video, audio and data streams independently

Future-proof Investment
Maximize infrastructure lifespan with format-agnostic technology

Maximum Efficiency
Increase resource utilization via efficient distribution of dedicated workflows

Assured Interoperability
Simplify deployment of multi-vendor IP solutions

Reduced Bandwidth
Use bandwidth more efficiently when transporting uncompressed video

When ST 2110 is used to transport uncompressed video, **only the active part of the image is sent** — leading to bandwidth savings of

UP TO **30%** compared to SDI and ST 2022-6[2]

APPLICATIONS

- Film/Broadcast/OTT production & postproduction
- Theme parks (show control, image, & sound)
- Live event production
- Museums (large audio/video displays)
- Digital advertising
- Digital release production & postproduction
- Media research
- Contribution
- Primary distribution

WHAT'S NMOS GOT TO DO WITH IT?

The Network Media Open Specifications (NMOS), developed by the Advanced Media Workflow Association (AMWA), **make a 2110-based infrastructure manageable.**

The specifications describe how devices on a network can **detect each other and available streams**

And make it easier to build IP production facilities **by automating configuration of device connectivity in all environments.**

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