

Fundamentals of MPEG-DASH

Course Overview

This 2-day technical course focuses on the fundamentals of adaptive streaming using the MPOEG-DASH standard. The requirement for adaptive streaming technology is explored before reviewing the various standards available in the market today. The MPEG-DASH standard is then explored in more detail, looking at how it meets the fundamental requirement for adaptive-rate streaming. The further advantages in network topology that the standard enables are also explored, along with the service 'add-ons' that the flexibility of the technology brings.

Course Programme

The course programme covers:

- The need for adaptive streaming
- The fundamental principles of MPEG-DASH
- Practical considerations and network design gains
- Service enhancements.

Technical Level

This is a technical course and although no prior knowledge of the subject matter is required, the ability to assimilate and understand technical concepts is essential. A technical background in audio-visual coding and IP techniques is desirable in order to derive maximum benefit from the course. Please contact us if you are unsure about the technical level of this course.

Who will benefit?

This technical course is aimed primarily at engineers, technicians and managers working in the broadcast and media industries. It is suitable for both new entrants to the field and more experienced staff with gaps in their knowledge. Technical sales and technical marketing personnel involved in selling and marketing media products and services will also benefit from the course.

Learning outcomes

Upon completion of this course, participants will be able to:

- Explain trends in online media delivery
- Understand the need for adaptive streaming
- Understand the underlying MPEG-DASH delivery mechanisms
- Understand the further benefits enabled by MPEG-DASH
- Appreciate how standards are implemented in a media network

Course Location

The course will be held either at the Ubi-Tech training facility or on the customer premises

Course Content

Online Media Streaming

- Principles of IP media streaming
- Existing real-time streaming protocols
- The changing consumption habits for media, broadband, mobile etc.
- The need for adaptive streaming
- The need for content distribution networks (CDNs)

Principles of MPEG-DASH

- Fundamental principle of adaptive streaming
- Overview of the various adaptive streaming protocols
- Details of the MPEG-DASH standard
- The XML DPD and what it does

The Further Benefits of MPEG-DASH

- Potential for additional service benefits beyond rate adaption
- Enabling CDN expansion
- How MPEG-DASH works with content protection protocols (DRM)
- The potential for so-called 'trick-modes'
- Advert insertion
- Multi-stream presentation e.g. multiple camera views, language tracks
- Scalable coding
- Multiple service elements; audio description, subtitles