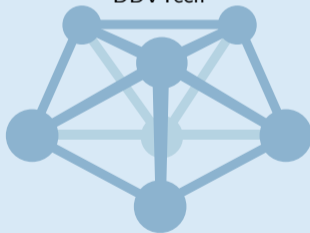


An introduction to OTT

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September 9, 2016

What is OTT, anyway?

- OTT → over the top
- Not delivered through traditional cable/receivers



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- To put it simply: video over the internet
- IP STBs, HBBTV, etc are also OTT



Important topics

- Codecs
- Containers
- Transport



Codecs

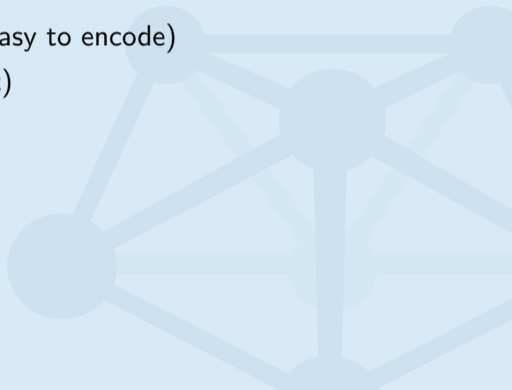
- A method to encode media for storage/transport
- Popular current video codecs: H264/AVC, H265/HEVC, VP8/9
- Popular current audio codecs: AAC, Opus, (MP3), (Dolby/DTS)
- Popular subtitle codecs: subrip/WebVTT, . . . , . . .

Codecs

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- Popular current video codecs: H264/AVC, H265/HEVC, VP8/9
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- Upcoming video codec(s): AV1 (VP10+Daala+Thor) (2017-2019-ish)

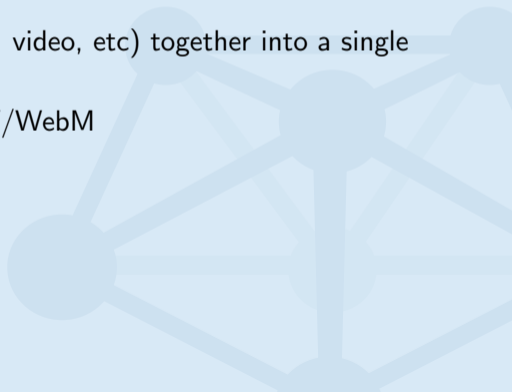
How to pick a codec

- Convenience (media already encoded and/or easy to encode)
- Bitrates (newer codecs → more quality per bit)
- Hardware support
- Container/transport compatibility



Containers

- Dictates how to “mix” multiple codecs (audio, video, etc) together into a single stream or file
- Popular choices: MPEG2 TS, ISO MP4, MKV/WebM



Containers

- Dictates how to “mix” multiple codecs (audio, video, etc) together into a single stream or file
- Popular choices: MPEG2 TS, ISO MP4, MKV/WebM
- Flash (RTMP/FLV) and (S)RTP (WebRTC/RTSP) are also containers

Transport

- How the codecs (inside their container) are transported over the internet
- Multiple types:
 - True streaming (RTSP, RTMP, WebRTC)
 - Pro: fast start, low latency
 - Con: needs media server or web server extension, firewalls
 - HTTP pseudostreaming (FLV, MP4, MKV/WebM)
 - Pro: low latency, high compatibility
 - Con: needs media server or web server extension
 - Segmented HTTP (HLS, HSS, DASH, fMP4)
 - Pro: easy to proxy, can use regular web servers
 - Con: slow start, high latency

That was it for my brief introduction

Next panellist!

