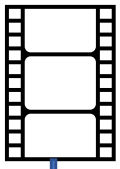
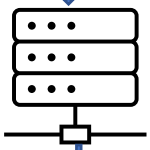
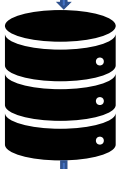
PROOF OF CONCEPT MPEG-DASH ARCHITECTURE



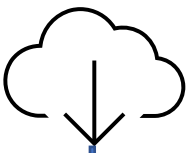
Video / Media Asset:
This represents the actual media content that is to be served using MPEG-DASH



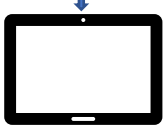
MPEG-DASH Transcoding:
The basic idea of video transcoding is to improve video experience for users. Most videos are very large and consume a lot of bandwidth and device memory. Transcoding helps to create multiple versions of the same video in different sizes. This creates various versions have been optimized to ensure the ideal versions for users based different internet speeds. In this development, we will be using **FFmpeg** to transcode our videos over **DASH (Dynamic Adaptive Streaming over HTTP)**



MPEG-DASH:
The final product of the mpeg- dash transcoding is the MPEG-DASH package which consists of various discrete media files of the specified video which have been versioned and optimized to ensure a good streaming experience for users. A very important file with the extension **.mdp** is generated within the package which consists of a description of resources forming the streaming service. Any MPEG-DASH client can read it to determine which assets to request in order to perform adaptive streaming of content.



AWS S3 Object Storage:
Due to how large some of these packaged files can be, we need a scalable cloud storage infrastructure to store these file contents. We can use AWS S3 and add a CDN (AWS CloudFront) to ensure faster asset retrieval.



Client:
Any MPEG-DASH client can then read the .mdp file, determine and stream ideal video contents based on the internet speeds of users.

Link to source code: https://github.com/philipappiah/onvutech-test.git