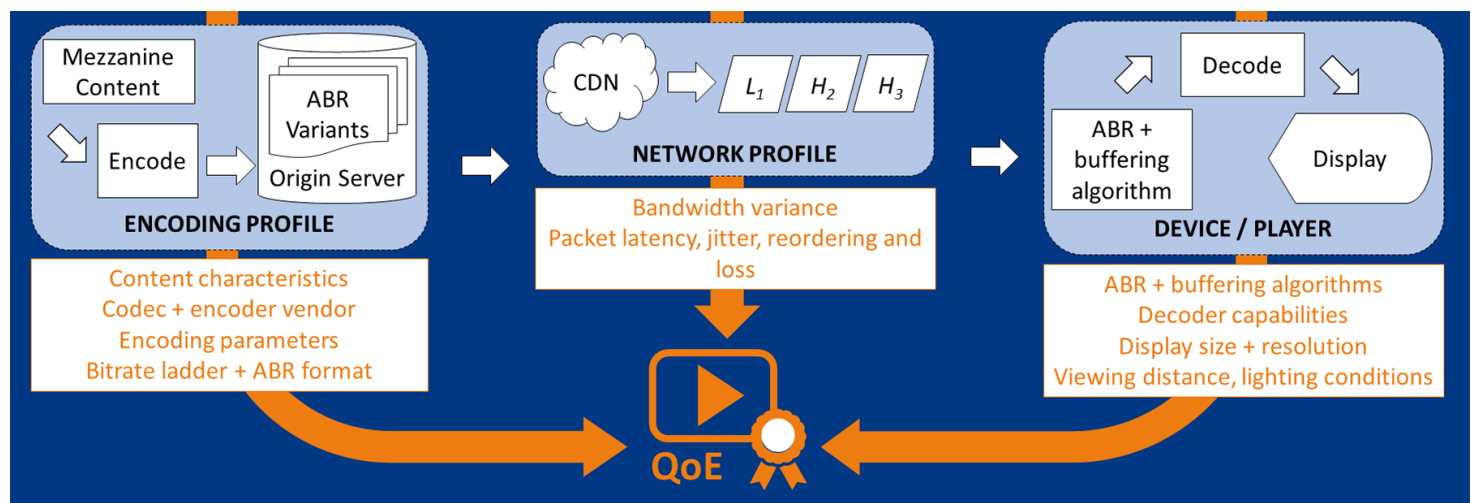


# Video Streaming QoE Analysis & Testing




OTT service providers strive to deliver the best possible customer experience on all devices (TV, mobile, tablet, computer, STB), in typical internet conditions, for all the types of video content in their catalogue, while minimising the total cost of delivery. This balancing act is difficult to get right and mistakes can be very expensive, yet many providers rely on educated guesses to design their system. Service providers need to select encoding technology and software media player vendors while lacking objective evidence about how their choice might impact QoE. To enable OTT service providers, encoder vendors, media player vendors and device manufacturers to deeply understand and analyse QoE Eurofins Digital Testing now offers a purpose-designed QoE analysis framework.


This framework allows users to understand the impact of all the factors affecting QoE, as illustrated in the following diagram.







The framework enables analysis of video playback quality for a combination of different encoding profiles, network profiles and video players to find the optimum encoding profiles as well as correct issues found on specific video players. There is a huge number of these combinations to check, so doing this manually can be a very time consuming and difficult to repeat process.

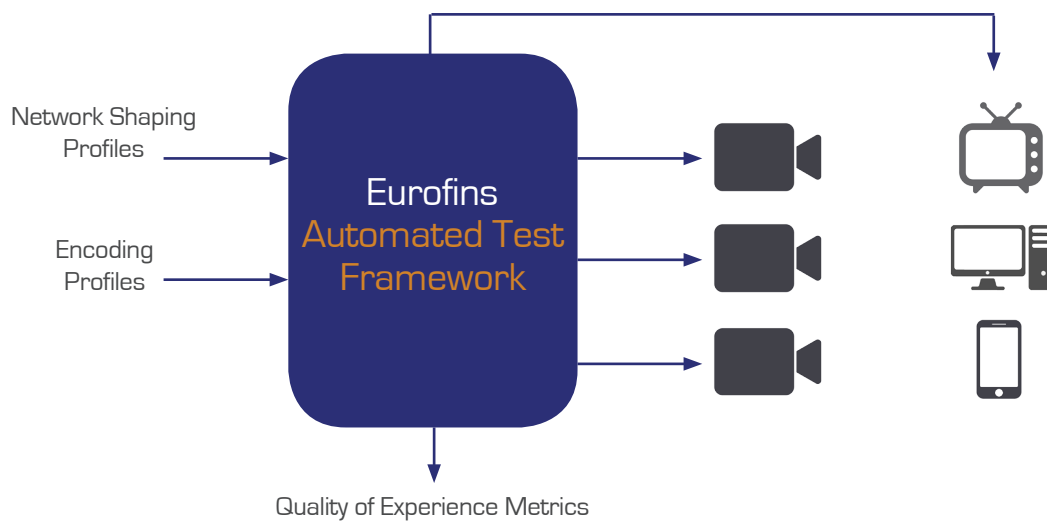
So at Eurofins Digital Testing, we have worked with Akamai to ensure the framework makes testing hundreds of video playback condition combinations affordable. The framework enables users to:

-  Optimise encoding profiles to maximise QoE or minimise distribution costs.
-  Analyse in depth the factors that impact the QoE of via an intuitive and powerful results interface.
-  Objectively demonstrate the advantage of their technology – e.g. a quality based encoder or a particular web-player – when compared to its competition.

-  Easily regression test the behaviour on a range of devices as encoding profiles are adjusted or devices updated.

Our framework relies on patent-pending QR-code based technology embedded in the video, which allows us to compute in an automated way metrics such as:

-  Delay between play command and actual video playback start
-  Number and length of buffering events
-  Number of switches between ABR representations/ variants
-  Video QoE scores (using the industry leading SSIMPLUS metric) for each frame, and averaged across frames.



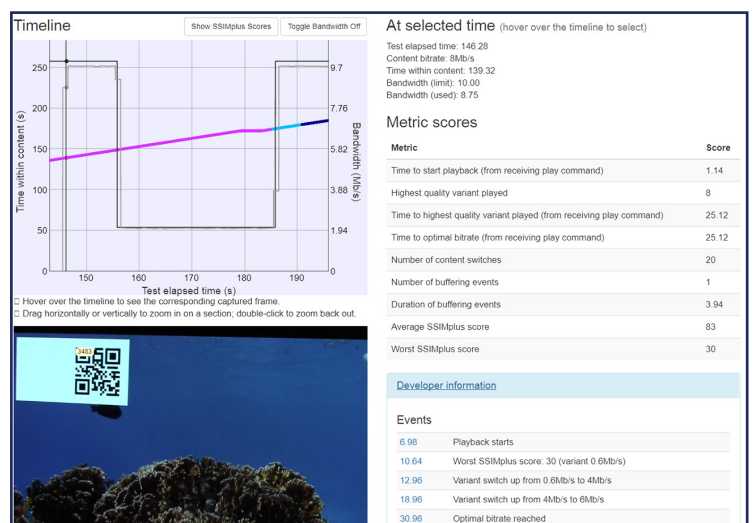
We offer a managed service where our customers select their target market parameters to investigate (devices, player apps, network conditions, content types and encoding profiles) and we provide a detailed analysis of the test results including interactive visualisations (right).

Typical encoding parameters that users might want to vary include frame rate, resolution, bit-rate ladder, codec and specific parameters that would be used in a given encoding tool chain.

Our technology supports a wide range of devices such as TVs, STBs, mobile phones, tablets and, computers. More information can be found [here](https://ott-qoe.eurofins-digitaltesting.com).

**To see some examples of this analysis and view the results please visit:**

<https://ott-qoe.eurofins-digitaltesting.com>



## About Eurofins Digital Testing

Eurofins Digital Testing is the world's leading end-to-end Quality Assurance (QA) service provider for Digital TV Operators and device testing specialists, operating globally with test lab facilities in the UK, Belgium, Poland, Sweden and Hong Kong. We provide specialised on-site test resources, testing tools and services to validate digital media delivery systems and device conformance for multiple standards and operators across the world. Eurofins Digital Testing was formed from the merger of Digital TV Labs and Testronic Labs Belgium and is part of the Eurofins Group. Eurofins has a network of more than 375 laboratories in 41 countries and has over 30,000 employees worldwide. Eurofins Digital Testing delivers complete testing solutions to manufacturers, broadcasters, operators and related media and device supply chains, covering terrestrial, satellite, cable, OTT and IPTV delivery.



W: [www.eurofins-digital-testing.com](http://www.eurofins-digital-testing.com)

E: [DigitalTesting@eurofins.com](mailto:DigitalTesting@eurofins.com)

Twitter: @EurofinsDigital