



OPERATING EUROVISION AND EURORADIO

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STRATEGY FOR ADAPTING STREAMING QUALITY DURING TIMES OF CRISIS

This recommendation has been precipitated by the worldwide COVID-19 crisis and is designed to provide guidelines to EBU Members and other broadcasters.

It is envisaged that this recommendation be updated as the crisis evolves.

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Strategy for Adapting Streaming Quality During Times of Crisis

<i>EBU Committee</i>	<i>First Issued</i>	<i>Revised</i>	<i>Re-issued</i>
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Keywords: Streaming, CDN, Broadband, OTT, On-demand, Live-streaming, MPEG-DASH, Adaptive Streaming, MPEG-4, HEVC.

The EBU, considering that:

The COVID-19 pandemic has precipitated changes to EBU Members' operating scenarios, particularly relating to their broadband services:

- EBU Members' public service media obligations are to inform, educate and entertain their audiences. In times of crisis, this role is accentuated;
- Broadcasters are adapting their schedules to address the challenges of people working, being educated, as well as simply being confined, at home;
- The numbers of people working from home and being schooled at home have made an unprecedented impact on Internet traffic patterns, which may give rise to congestion on those networks. Congestion issues could be acute during normal daily working hours;
- EBU Member services are available on a wide range of devices, and - unlike online streaming companies - across TV and radio broadcast networks, in addition to their online offerings available through websites and applications;
- EBU Members have noted that, generally, Internet traffic congestion is more acute on mobile than on fixed line connections;
- There is no traffic congestion on broadcast networks.

Recommends that during a time of crisis:

- 1) EBU Members, their local telecommunications network providers and administrations **analyse** the change in traffic patterns that may lead to Internet network congestion.
- 2) EBU Members act as facilitators at a national level for consensus amongst local OTT (over-the-top) providers in their efforts to address the challenges of Internet network congestion.
- 3) EBU Members seek to **adapt** their streaming services based on this analysis to address the challenge of network congestion while respecting their public service media obligations. Such measures could include:
 - a. *Reducing the streaming bitrate by appropriate reduction of the top level of quality offered to clients particularly during office hours;*
 - b. *Arranging the adaptive streaming manifests to serve premium quality to fixed large-screen devices over mobile devices;*
- 4) EBU Members might communicate with their audiences to adapt their viewing/listening patterns to help address the potential for network congestion. Where beneficial, measures could include informing their consumers to:
 - a. *For linear services, favour the use of broadcast reception, via radio broadcast (FM, DAB/DAB+) and television broadcast DTT (Digital Terrestrial Television), DBS (Direct Broadcast Satellite) and Cable TV, which do not impact Internet network congestion;*
 - b. *At home, switch to WiFi/Internet where available rather than using 5G/4G/3G reception, as the former is more resilient to network congestion.*