

5G OPPORTUNITIES FOR BROADCASTERS

5G is an emerging broadband technology that aims to enable new services for consumers and business users. It may allow broadcasters to produce their content in a more efficient way and may become a new distribution platform for their services. The EBU facilitates broadcasters' engagement in 5G standardization and a dialogue with the industry.

BACKGROUND

With superior technical capabilities compared to earlier mobile communications systems – such as very low latency, very high reliability, improved spectrum utilization and energy efficiency – 5G is designed to support three main service categories: 'enhanced mobile broadband', 'ultra-reliable and low-latency communications', and 'massive machine type communications'.

New network management features such as network slicing will enable the creation of multiple virtual networks within a single physical network, each tailored to a particular application or user. Interconnection between 5G and other types of network, such as Wi-Fi or satellite, will be allowed. Integration with terrestrial broadcast networks might also be possible in the future.



The first set of 5G specifications was approved by 3GPP in 2018 (Release 15), but developments and standardization of the technologies continue. Network rollout has been announced in a number of countries and some partially 5G-enabled user equipment is already commercially available. In most cases, these early efforts aim at the consumer market and mobile broadband services.

In public mobile networks, 5G will initially be deployed as an add-on to 4G/LTE, providing additional functionality as required. Standalone 5G networks will be deployed later. The policy objective in Europe is to provide 5G coverage in large cities and along major transport routes by 2025, but the timescale for nationwide coverage is uncertain. As with 4G networks, 5G will be progressively rolled out but may not be available everywhere for many years.

5G can also be deployed in private networks, e.g. campus networks dedicated to particular users or applications. Deployments of 5G private networks will be subject to suitable licensing conditions that are yet to be defined.

THE CHALLENGE FOR PUBLIC SERVICE MEDIA

5G might allow broadcasters to produce and distribute their content in a more efficient way in terms of improved technical and operational efficiency, increased flexibility, and improved offerings to audiences. However, broadcasters need 5G networks with large and ideally nationwide coverage, sufficient capacity, and high reliability. Cost aspects will also be essential, but the information currently available is insufficient for an in-depth assessment.

Public service media (PSM) organizations will use 5G in ways that are supportive of their remit and compliant with their regulatory requirements. This includes universal availability, possibly by means of free-to-air delivery, and unconstrained access to the audience and to audience data. This may also require suitable regulatory conditions for 5G deployment and new kinds of business arrangements with the network operators.

Content production and contribution would benefit from super-fast, low-latency, and highly reliable wireless connections. Using either the public network infrastructure or private 5G networks, new workflows could be enabled in newsgathering, remote production, live event coverage and user engagement, but also in dedicated production facilities.

In distribution, the impact will take longer to be felt. 5G is designed to allow distribution, in particular to portable and mobile devices, of a range of audiovisual content and services. However, content distribution at scale would only be viable when network coverage, capacity and user device penetration reach certain minimum thresholds; when suitable regulatory conditions are defined; and when appropriate commercial models are established. Widespread use of 5G infrastructure, coupled with improved economics of broadband distribution and support from policymakers, may disrupt current broadcast distribution models. At the same time, 5G might enable new types of services and an extended reach.

Given its long deployment timescales, **5G is likely to co-exist with the existing broadcast technologies and infrastructures for a substantial period.** Furthermore, it is expected that it will be possible to deploy 5G networks in several different ways, possibly including some degree of integration with terrestrial and satellite broadcast networks, which may allow novel technical solutions and business arrangements.

WHAT IS THE EBU DOING?

Public service media seek to ensure that their future technical and operational requirements, as well as their regulatory obligations, are duly considered in 5G developments. In order to test 5G networks and verify that broadcasters' requirements can be met in real-life conditions, EBU Members are engaged in a number of 5G tests and trials as documented in EBU Tech Report 044.

The EBU facilitates Members' engagement in 3GPP for 5G standardisation, and in other relevant international bodies. The EBU also maintains a dialogue with regulators, policymakers, and the industry in order to influence 5G developments in such a way that it provides future benefits to PSM.

EBU project groups cover a range of topics, such as 5G standardization, 5G in content production, mobile broadcast network planning, and 5G deployments. Some EBU project groups are open to both EBU Members and external participants.

FIND OUT MORE

EBU Tech Report 044: <https://tech.ebu.ch/publications/tr044>

EBU policy positions: '5G and Media – key principles for guaranteed access to public service content'
<https://www.ebu.ch/legal-policy/5G>

Visit the EBU Strategic Programme on Distribution homepage <https://tech.ebu.ch/distribution> for links to project groups, some of which are also open to external participants.

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