

5G OPPORTUNITIES FOR BROADCASTERS

5G is an emerging broadband technology that aims to enable new services to 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 within a single physical network of multiple virtual networks, each tailored to a particular application or user. Interconnection between 5G and other types of network, such as Wi-Fi and satellite, will be allowed. Integration with terrestrial broadcast networks might be possible in the future.



The first set of specifications (Release 15) were approved by 3GPP in June 2018 but further developments continue. It is expected that by 2020 spectrum for 5G will be allocated and 5G equipment will be commercially available, which will allow network rollout to begin.

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. Private 5G networks will be possible soon but will depend on suitable licensing conditions being 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, 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 look to 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 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 whole range of audiovisual content and services. However, content distribution at scale would only be viable when network coverage and capacity and user device penetration reach certain minimum thresholds, when suitable regulatory conditions are defined and when commercial models are established. Widespread use of 5G infrastructure, coupled with the 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 service and an extended reach.

Given its long deployment timescales, **5G is likely to coexist with existing broadcast technologies and infrastructure for a substantial period.** Furthermore, it is expected that 5G networks can be deployed 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?

Broadcasters seek to ensure that their future technical and operational requirements and regulatory obligations are duly considered as 5G develops. It is also important to test 5G networks to verify that broadcasters' requirements can be met in real-life conditions.

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

The EBU strategic programme on Future Distribution is a focal point for 5G-related work. It is open to EBU Members. In addition, several project groups, some open to external participants, are dealing with specific topics such as 5G standardization, 5G in content production, mobile broadcast network planning, and 5G deployments.

FIND OUT MORE

Strategic Programme: Future Distribution

<https://tech.ebu.ch/fd>

Visit the Future Distribution homepage for links to project groups, some of which are also open to external participants.