

Call for Papers
IEEE Transactions on Broadcasting
Special Issue on 5G Media Production, Contribution and Distribution

Production and contribution technologies are increasingly moving towards IP-based workflows. The fifth generation of mobile technologies, 5G, may represent an opportunity for the media industry as it fits well with the transition towards IP and need for cloud-based and fog-based distribution. 5G may add more reliability, flexibility and mobility and therefore enables the transition from simple connectivity workflows for newsgathering or single camera contributions to much complex environments such as large live events.

Newsgathering using more reliable public networks, where sufficient 5G coverage and capacity are available, could migrate from bonded solutions to a single 5G connection. The deployment of non-public networks (NPNs) may offer the possibility to tailor networks to meet demanding service requirements and high quality of service needs.

3GPP standards have adopted requirements from the media industry under the Audio-Visual Service Production (AVPROD) study item. This is a significant step forward towards creation of an ecosystem of tools for media production, with challenging system requirements. While many 5G use cases are primarily focused on high downlink capability, the data flow for production and contribution demands excessive uplink capacity. This fact and the need for very high quality of service or low latency determine a substantial gap to be closed by means of standardisation. The combination of new paradigms such as software-defined networks (SDN), software-defined radio (SDR), open radio access networks (O-RAN) or network slicing may result in greater flexibility for integrating more affordable components from multiple suppliers or providing the ability to implement and deploy subsets of functions required by specific workflows.

The successful deployment of 5G solutions for media are not only dependent on technical enablers, but also conditioned on business and regulatory aspects. Spectrum availability remains essential for wireless production equipment, which often requires temporary and nomadic setups. On the commercial side, the use of 5G may be an opportunity for collaborative scenarios with public networks, cost-effective deployments based on solutions with global reach, and flexible local operations.

This special issue seeks to publish original high quality papers on the use of 5G for media production, contribution and distribution. Topics of interest include, but are not limited to:

- 3GPP Release-17 standardization on 5G media-related topics.
- 5G content production, contribution and remote production.
- 5G broadcast and 5G broadcast core network convergence.
- Field trials, 5G private networks for media.

Prospective authors should visit <http://bts.ieee.org/publications/ieee-transactions-on-broadcasting/information-for-authors.html> for information on paper submission. Manuscripts should be submitted at <http://mc.manuscriptcentral.com/tbc>. Manuscripts will be peer reviewed according to the standard IEEE process.

Important Dates:

Manuscript submission due: **August 15, 2021**

First review completed: November 15, 2021

Revised manuscript due: January 15, 2022

Final manuscript due: February 15, 2022

Publication date: **March 2022**

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