



Project Coordinator



Technical Managers

SAMSUNG NOKIA

Partners



TOWARDS 5G BROADCASTING

Using mobile technology for free-to-air distribution of enhanced media services to TVs and smartphones at scale

A DEMONSTRATOR OF THE 5G-XCAST PROJECT

By BROADPEAK



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 761498.



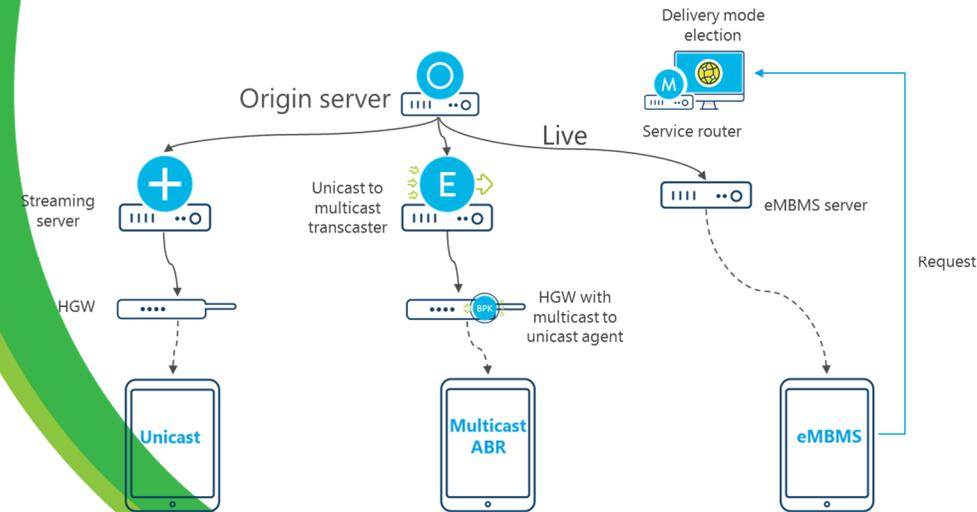
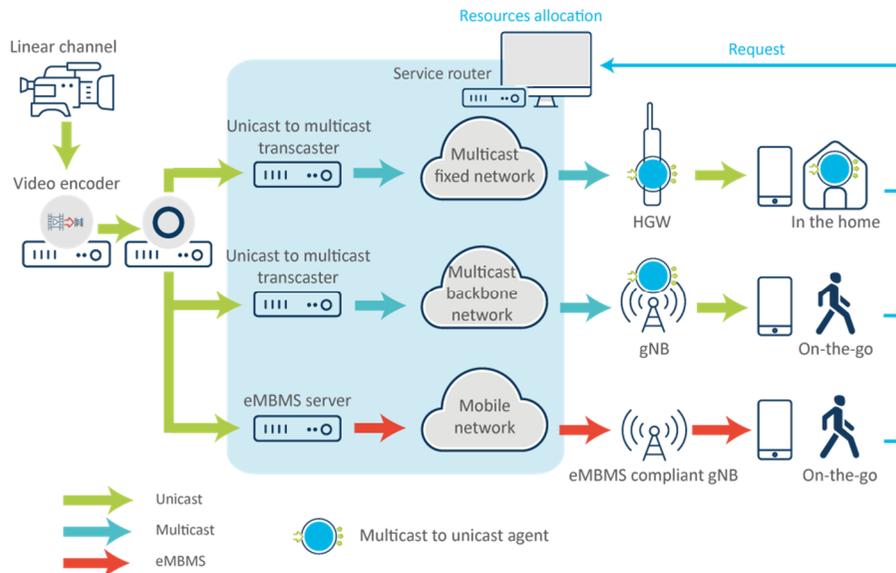
“Shaping 5G for large scale immersive media delivery: A forward-looking concept of using mobile technology for distributing audiovisual media with add-on services”

OBJECTIVE

- Add support to multicast and broadcast in 5G core, with network functions in both user and control planes.
- Combination of fixed, mobile and broadcast networks to realise the 5G converged core network.
- Flexible session control and resource management to meet the needs of new and diverse 5G use cases.

5G-Xcast will produce a network-agnostic content distribution framework to optimise network resources dynamically, whilst:

- Keeping the interface between the content service provider and the network operator as simple as possible.
- Treating multicast, broadcast and caching as built-in internal network optimisations, not as a service.



THE DEMO

The demo shown on Broadpeak booth at IBC illustrates 3 examples of how the delivery path can be adapted to the user context.

The live content delivered is the same on all the channels and is supposed to be a popular one (hence available in multicast).

- In a house where the home gateway is not equipped with a multicast to unicast agent: the content is delivered in unicast from a streaming server.
- In a house where the home gateway embeds a multicast to unicast agent: the content is delivered through multicast ABR and converted from multicast to unicast in the home gateway.
- On the go, in a cell covered by an LTE-B compatible gNB, and to a device that is equipped with an LTE-B chipset: the content is delivered in eMBMS.

Note that there is a delay of about 30s between the unicast streaming and the multicast streaming, since the usage of a best effort unicast network requires a bigger player buffer to guarantee a good QoE.