TSG RAN meeting #75
March 6-9, 2017, Dubrovnik, Croatia
Agenda Item: 9.1

RP-170774

WF on multicast/broadcast specifications

Qualcomm, BBC, BT Group, Cellnex Telecom, Dish Network, EBU - European Broadcasting Union, ETRI, Fraunhofer IIS, IRT - Institut für Rundfunktechnik, Nomor Research GmbH, one2many, Rhode & Schwarz, Samsung, Telefonica, Telstra Corporation, Thales, UPV/EHU - Universidad del País Vasco/Euskal Herriko Unibertsitatea

Proposal 1

- In order to enable seamless introduction of multicast services in NR, add the following objective to the Rel-15 NR WID
  - *Specify features to ensure forward compatibility with multicast / broadcast services*

Proposal 2

- Agree on a task (either SI or WI) of gap analysis for dedicated eMBMS in the LTE track in the Rel-15 time frame
  - Example objectives:
    - 1. Carry out a gap analysis between EnTV and MBMS_LTE_enh2 features specified for Rel-14 and the MBMS requirements given in TR38.913.
    - 2. Study and specify those features which are not covered by the exiting eMBMS specification. This refers in particular to – but shall not be restricted to – cell radii of up to 100km, mobility of up to 250 km/h and the operation and sharing of a dedicated standalone MBMS network, if the gap analysis in 1) shows that these are not supported by Rel-14
      - The feasibility of these features should be evaluated for a dedicated LTE-based RAN with the features specified for Rel-14.
    - 3. Study and if found beneficial specify techniques for reducing energy consumption of MBMS operation.
    - 4. Study and if found beneficial specify techniques to increase in statistical multiplexing efficiency, supported data rate and spectral efficiency for fixed and mobile reception to cater for the higher quality television and video services, in particular for UHD.

Proposal 3

- Agree Study Item in the NR track to adopt mixed unicast / multicast service in an NR carrier
  - Example objectives:
    - 1. Study the implications of the technologies agreed in NR Phase I (e.g. impact of new channel coding, new waveforms, scalable numerology design, etc.) to multicast/broadcast
    - 2. Study the implications of the new frame structure on the efficient integration of mixed multicast/broadcast/unicast in NR
    - 3. Study the implications of increased bandwidth of NR to mixed multicast/broadcast.
    - 4. Support of efficient multiplexing of multicast/broadcast with unicast transmissions in at least frequency domain and time domain
    - 5. Study techniques for dynamic coexistence with other services in a mixed multicast/broadcast/unicast carrier
    - 6. Study the mechanisms to support network sharing between multiple network operators