New WID on RAN aspects of Group Communication in LTE: motivation

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Background

- Many Public Safety organizations are considering LTE as the next generation technology
- To position LTE as technology for critical communications such as public safety, group communication will be needed.
- On SA-groups' side:
  - The new stage-1 TS 22.468 on Group Communication System Enablers for LTE has been completed, with the final version of the specification (S1-133306) sent for 1-step approval at SA#60
  - The relevant Stage-2 work in SA2 (SP-130158) has also been agreed and work is ongoing to study a solution at the system level in the new TR 23.768
- As the next step, it is important to identify and specify any improvements needed in the RAN level specifications to meet the service requirements specified in SA.

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Proposal: work item of two phases

1. Study how the stage-1 requirements can be met and identify any RAN level improvements that may be needed to meet them
   - Given SA1 completion, early start with this phase seems useful despite SA2 progressing in parallel
2. Select and specify solutions concerning PS-capable UEs in relevant specifications, if need for improvements is identified in the first phase

- Note: enhancements to be required only from a new UE capability, to be introduced

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Selected requirements from TS 22.468

- Performance:
  - The system should provide a mechanism to support a Group Communication end-to-end setup time less than or equal to 300ms.
- Resource efficiency
  - The system shall provide a mechanism to efficiently distribute data for Group Communication.
- Scalability:
  - The number of Receiver Group Members in any area may be unlimited
- Geographical scope of GCSE Groups:
  - The system shall provide a mechanism to restrict all Group Communications for a given GCSE Group to a defined geographic area. In this case Group Members shall be able to receive and/or transmit only within this geographic area.

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