

# Discussion on the FS\_MINT-CT (Minimization of Service Interruption)

LG Electronics



# Brief history of MINT-CT

- In CT1#125e meeting (August 2020), LGE had provided the new WID proposal for CT aspects of MINT (Minimization of Service Interruption) based on the stage 1 requirements (C1-204646)
  - During the discussion, some companies suggested to add further impacts on CN functions (i.e. impacts to the other CT WGs)
- Another comment was on whether CT1 can work on the stage 2 aspects. For this, CT1 approved an LS to TSG SA (Cc: CT, CT3, CT4, SA2, SA3) for asking confirmation (C1-205332)
  - CT1 is also planning to define end-to-end call flow regarding registration after selection of a disaster roaming PLMN in the stage-2 specification owned by CT1.
  - CT1 would like to ask TSG SA if there is any concern on this approach.

# LS response from TSG SA

- SA discussed on the LS in TSG SA#89e meeting, and approved the reply LS back to CT1 as follows (SP-200880 / C1-205884)
  - TSG SA has discussed the matter in their SA#89-e meeting and agreed that CT1 has **a study item** including
    - a) How one PLMN failure does not lead to signalling overload in other PLMNs; and
    - b) how to avoid “returning UEs” overloading the PLMN that had earlier failed.
  - When the study is completed, then CT1 should consult with SA and SA2 on how to proceed with normative work..



# Way forward

- As per SA's decision, CT1 should study on both stage 2 and stage 3 aspects of MINT work item, before any normative work.

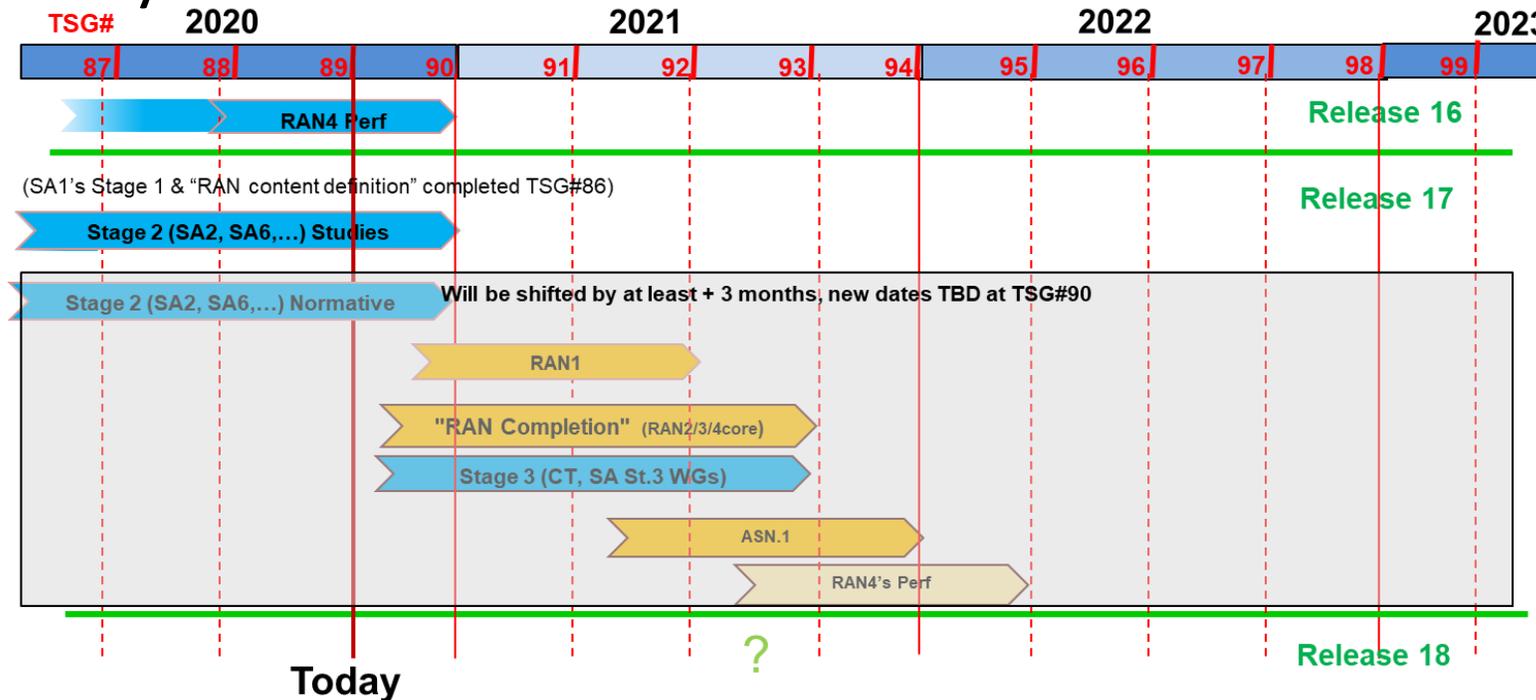
**Proposal. CT1 should first study on the stage 2 and stage 3 aspects of service requirements for MINT within a dedicated study item before the normative phase.**

- Since this study will be done in CT1, some of the objectives are to be updated compared to the last version of SID/WID.
- The new SID is provided to CT1#126e meeting, in **C1-206290**.



# Time plan (1/3)

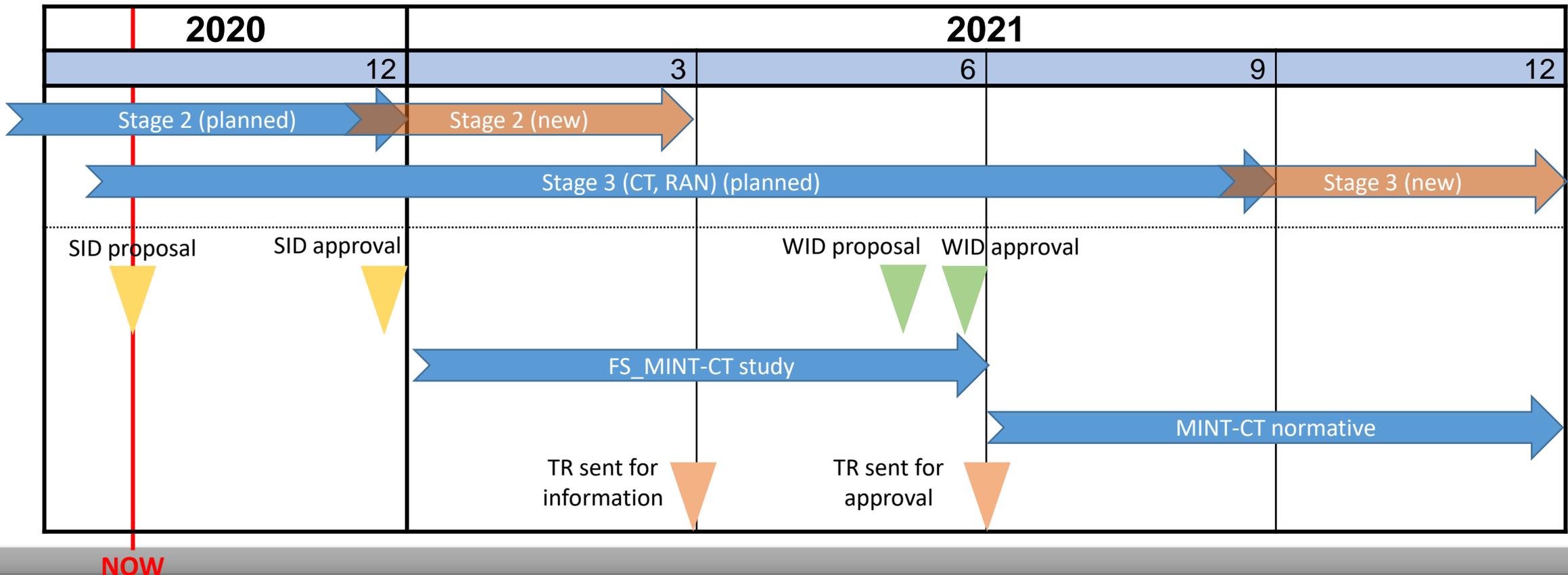
TSG #89e has discussed the time plan for Rel-17, and will determine in the next TSG meeting in Dec 2020. the tentative way is shift the target completion by at least 3 months.





# Time plan (2/3)

Considering this (to be) updated time plan, the rapporteur's plan for MINT study phase and normative phase is as follows:



# Time plan (3/3)

- ✈ Since the progress of MINT-CT is already delayed, both study phase and normative phase should be done in a timely manner.
- ✈ Main target dates are (if the SID proposal is approved in this meeting)
  - SID approval: December 2020 (TSG#90)
    - TR sent to plenary for information: March 2021 (TSG#91)
    - TR sent to plenary for approval: June 2021 (TSG#92)
  - SID completion: June 2021 (TSG#92)
    - If the R17 schedule is shifted by 6 months, the completion can be further shifted as well.
  - WID approval: June 2021 (TSG#92)
  - WID completion: December 2021 (TSG#94)
    - If the R17 schedule is shifted by 6 months, the completion can be shifted as well.

# Potential Key issues (1/2)

- Based on the stage 1 requirements, and the suggested objectives in the SID, the following aspects should be investigated
- the stage-2 of MINT feature whether there is any CN impact required.
    - This will include the end to end flow for the registration procedure to the roaming PLMN
    - The conclusion of this KI will affect the other KIs
  - Disaster condition notification aspects
    - how a UE can obtain information of particular PLMN(s) when a Disaster Condition applies;
    - how a UE and roaming PLMN(s) can be provisioned of the area where a Disaster Condition applies;
    - how a UE can be aware of the failure of a PLMN when a Disaster condition applies;
    - how roaming PLMN(s) can determine and indicate to potential Disaster Inbound Roamers whether they can access the PLMN or not;
    - how a UE can access PLMNs in a forbidden PLMN list if a Disaster condition applies;

# Potential Key issues (2/2)

- Returning / Recovery aspects
    - how a UE and roaming PLMN(s) can be aware of the recovery of a PLMN used to be in the Disaster Condition and reselect the PLMN;
  - The congestion control aspects
    - how the PLMN providing disaster roaming can minimize congestion caused by the Disaster Roaming; and
    - how to avoid "returning UEs" overloading the PLMN that had earlier failed;
    - **These are also pointed out in the incoming LS from TSG SA.**
-  Actual KI proposals can be discussed in CT1#127e meeting, if the SID proposal is approved in this meeting.