

# Cross border mobility related to IMS calls and LI for home routed IMS



Ericsson proposed way forward

# Background



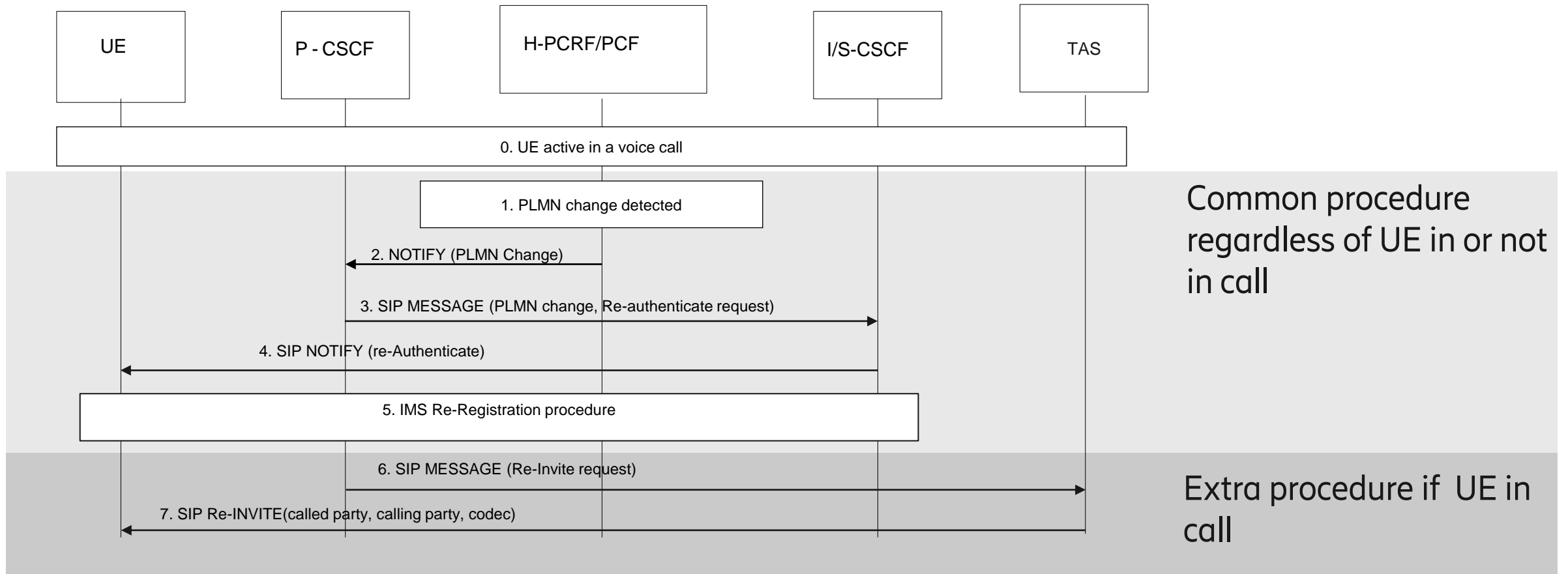
- Currently, if IMS signalling uses encryption in HPLMN, mobility without re-establishment of the IMS PDN connection/PDU session cannot be done in most cases. The main reasons are related to the regulatory requirement for Lawful intercept:
  - LI in VPLMN uses tapping of traffic in SGW/UPF to be able to see all call related data, if traffic is encrypted this will not be possible.
  - LI in HPLMN may be enabled but only allowed by the regulation when UE is in the county of HPLMN. In such a case, when moving out LI need to stop intercepting traffic.
- LS S2-2203662 list LI requirements and some questions to SA2

# Questions and Ericsson proposed answers



- What changes are needed so the IMS can make the required information available?
  - IMS core to request UE to re-register. VoLTE UE should support this already
- What is the preferred mechanism to get the IMS-information provided to the VPLMN (e.g. as part of the registration process)?
  - See above, for ongoing calls, the telephony AS sends re-INVITE to provide means for LI to intercept call related information such as called and calling party.
- Are changes needed for the HPLMN to be able to deactivate or activate the IMS confidentiality protection during inter-PLMN handover?
  - Yes, see above
- Are changes needed for the VPLMN to detect if the correct configurations for roamers to allow lawful interception are in use at the VPLMN?
  - No changes to 5GC/EPC Specification for VPLMN actions foreseen, LI is outside SA2 responsibility.  
NOTE: Inter PLMN mobility is mainly a deployment issue, and not a specification issue

# Small differences between “while UE is in call or not in call”



# Way forward



- Decide what release the needed IMS changes are to be made
- Do not divide the needed changes in separate releases since the difference in between ongoing call and not ongoing call are minor, see previous slide for proposed flow and also proposed CR
- Our belief is that we can complete this work with a single CR under TEI18 with maximum of TU 0.5 since we can restrict the work with only impact on IMS & the UE supporting re-registration, i.e. EPC/5GC has no impact

# Terminal side



- Our understanding is that main chipset vendors and terminal vendors already should support the proposed solution, but to be verified.



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