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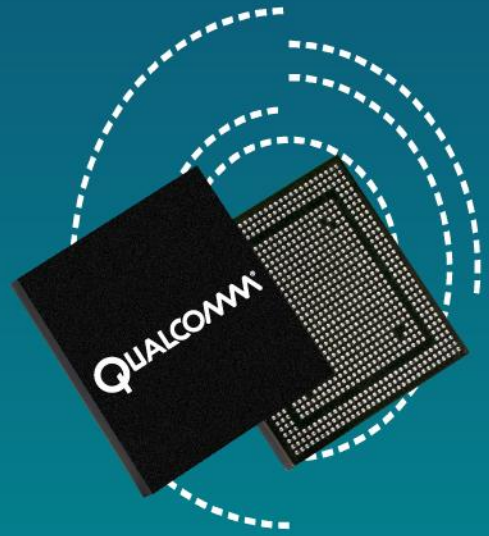

C6-150430 - Discussion paper on specific network availability

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Request from GSMA

- During CT6 #76, CT6 has received LS C6-150245 from GSMA
  - "new mechanism to allow the UICC to request the ME to check the availability of a specific 3GPP network while connected to another 3GPP network"

- Additional contribution with more details of the use case was presented in document C6-150268 during the same meeting CT6 #76.

- A summary of this requirement:
  - Applicable to eUICC with two (or more) profiles, where first profile is preferred
  - At some point, eUICC switches to second profile due to lack of coverage of first network (and no national roaming)
  - eUICC requires trigger to know when network associated to first profile is available, in order to switch back to first profile

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eUICC-centric solution

- The eUICC needs to be informed when a specific network (different from HPLMN) becomes available, while UE is attached to the HPLMN.
  - Alternatively, the eUICC would need to blindly try to switch back to first profile at specified intervals, just to find out that no service is available and switch back to second profile. The mechanism would waste time, power and cause additional signaling on the network associated with the second profile.

- A possible solution was described in document C6-150305:
  - UICC requests ME to perform scans looking for a specific PLMN at regular intervals and possibly restricting the scan to a certain Radio Access Technology
  - This solution is equivalent to a manual scan initiated by the user: it's basically a requirement for toolkit to initiate manual scan.

- Concerns:
  - A solution based on manual scan is possible, but impactful from a power perspective. It also requires the UE to be in idle and might potentially take a long time to complete.
  - The UICC can only have limited visibility on radio conditions and not in the best position to take decision on when to perform the scan.
  - The UICC is not protocol aware for the second profile to determine optimal time for scans (ie, AS congestion)
  - Privacy concerns about giving measurements of non-roaming partners to the USIM associated with second profile are present, as this information could be abused.

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ME-centric solution

- In general, the ME is in the best position to take decisions regarding availability of a specific network
  - Several of the techniques used for PLMN scanning and network acquisition are not specified and left to implementation, so that optimizations are possible.
  - ME can verify the presence of a certain PLMN in a power efficient way and without the need to be in idle mode
  - The “rules / policies” for the switch can potentially be written in the UICC or downloaded OTA, so that ME knows priorities of the profiles and other parameters.
    - The same rules / policies can be used also for the initial transition from first profile to second profile: also in this case, the ME is in the best position to know why the network is no longer available, especially in case of moving devices.

- Requirements
  - It requires ability for the ME to initiate a profile switch in the eUICC (local profile management)

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Conclusions

- 3GPP is currently not working on eUICC, so it is not in the best position to take a decision on the approach.
- It seems that both GSMA and ETSI SCP are working on new set of requirements to allow local profile management, so that should be considered while developing the solution.
  - Such solution would not have impact on 3GPP specifications
- Recommendation is to indicate an ME-centric solution is preferred

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Questions?

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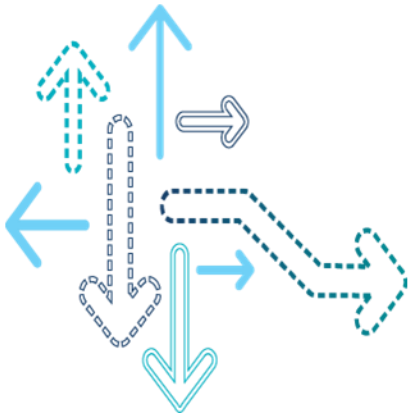

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