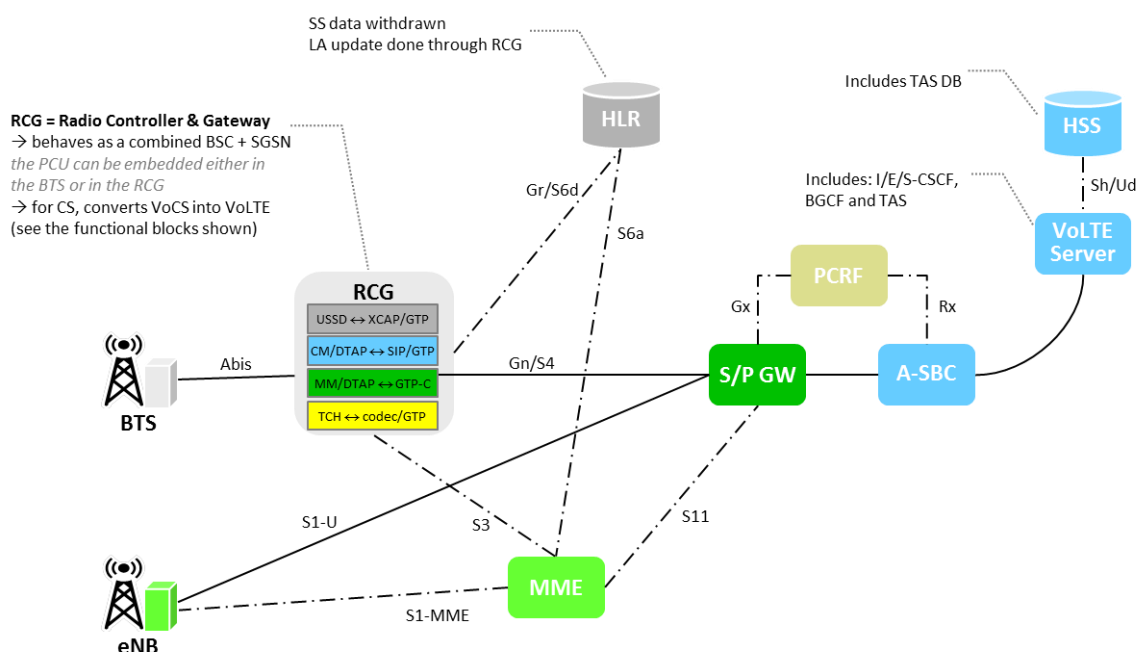


How to get rid of the SCC AS? {Part 2}

Do you remember this article where some solutions, outside 3GPP, are suggested to have a real consistency between IMS and Circuit domains without any SCC AS?

Here is THE ultimate solution: let's get rid of the Circuit domain! ☺ No Circuit domain, no SCC. Rather simple.

How can it be achieved while maintaining legacy GSM cellular phones on the network? Thanks to magic? No. The idea is to shift anchoring of voice from the MGW to the GGSN (or S/P-GW) and to translate the *CM Service Request* into a combined *GPRS Attach / PDP Context Activation* and DTAP messages into SIP messages over a GTP tunnel.



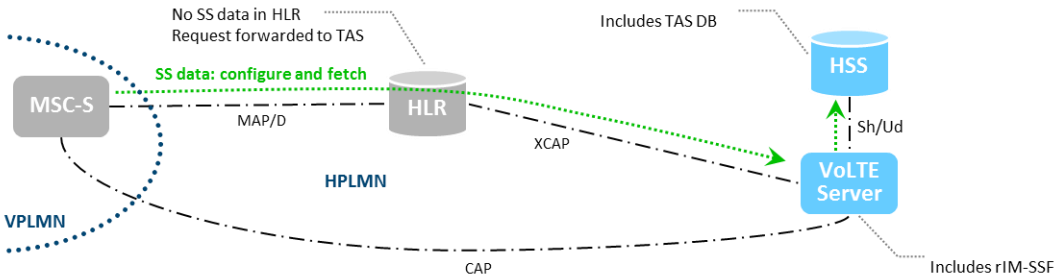
The new Radio Controller & Gateway (RCG) is a combined BSC/SGSN with additional functions to translate legacy VoCS into VoLTE.

- The establishment of the signalling link between the UE and the Circuit Core is converted into a GPRS attach (which could also be valid for regular GPRS services) and a PDP context activation dedicated to voice. Thus the voice stream will be anchored in the S/P-GW for mobility purpose.
- The call setup messages are converted into SIP messages embedded in the previously established GTP tunnel.
- The voice stream is also embedded in the same GTP tunnel (codec/RTP/UDP/IP/GTP).
- And USSD messages are converted to XCAP messages then embedded in the GTP tunnel.

Thus there is no more T-ADS or SR-VCC required. The subscriber is always served by the VoLTE server and voice call continuity from LTE to GSM is from now on seen as a handover from an MME to a target SGSN. Furthermore, supplementary services can be withdrawn from the HLR and centralised in the TAS database: consistency is *de facto* ensured.

In this implementation, you keep freedom to implement PCU either in the RCG or in the BTS. And it also works with the RNC that can be included in the RCG (but who cares about 3G?).

In roaming, such an architecture may not be implemented. To solve this issue, the VoLTE server is seen as an IN platform by the visited MSC-S and USSD messages are forwarded by the HLR to the VoLTE server after having translated them into XCAP messages. (This is already part of the proposals in the previous article.)



Now the key question: who will implement this solution?

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