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**3GPP TSG-SA WG2 meeting #26**  
**Toronto, Canada, 19<sup>th</sup> – 23<sup>rd</sup> August 2002**

**Tdoc S2-022618**

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**Title:** Reply LS on "Gb evolution"  
**Source:** TSG SA WG2  
**To:** TSG GERAN, TSG SA  
**cc:** TSG SA WG1, TSG SA WG3  
**Date:** 23 August 2002  
**In reply to:** GP-022012 (same as S2-021995)  
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**Attachment:**

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## 1. Background

SA2 would like to thank GERAN for providing their Feasibility Study on "A/Gb evolution". SA2 has discussed several aspects of the future evolution of GERAN. At this point, however, there is no consensus whether evolving the Gb-mode to support conversational class services is desirable, or the lu mode shall be kept as the sole solution for conversational class services in GERAN.

## 2. Summary of the SA2 discussions

It is SA2's understanding that answering the above question is largely guided by commercial discussions rather than technical ones. There may be considerable differences between operators' commercial interests due to different legacy backgrounds (e.g. wrt different cell planning for EDGE and GMSK uplink transmissions), different future investment plans, and timing differences for the introduction of services requiring conversational class. As a result, some operators do not see the deployment of lu-mode as commercially feasible, but other operators favour lu-mode deployment.

All in all, both the operator community and the vendor community are split with respect to what direction GERAN should evolve to.

SA2 understands that there is still work to do on lu-mode, e.g:

- work relating to the non-UMTS like functional split for CS data/HSCSD
- PS domain handover
- specification of "abnormal" case handling.

SA2 would like to understand the completion level of lu-mode standards (including the above items) to be able to fully assess the situation.

In the beginning of year 2000, a joint SA2/GERAN meeting decided to provide conversational services in GERAN via the lu-mode and not to enhance the Gb interface to carry conversational services. However, GERAN's activities on the area of Gb evolution may now be re-opening this decision.

SA2 understands that the rather substantial changes in commercial setting have led to motivations for possibly re-visiting the earlier decision. The initial estimations of completion of lu-mode standards and implementations have since been changed and delayed.

In SA2's understanding an Iu-mode GSM-UMTS mobile has to support UMTS Iu mode, GERAN Iu mode, and A/Gb mode (for use where the BSC vendor and/or operator has not upgraded the BSC). In this respect, one issue that needs to be clarified is the similarity or difference of Iu-mode GERAN and UTRAN Iu. SA2 kindly asks GERAN to clarify the differences between the GERAN Iu and the UTRAN Iu.

It is SA2's expectation that evolved Gb will not have any impact on the A interface. At the same time, Iu-PS requires the simultaneous deployment of Iu-CS.

Due to the obvious lack of commercial alignment between companies, there was insufficient time to examine the technical aspects of "Gb evolution feasibility".

It is understood by SA2 that the decision for Gb-mode evolution is likely to be made on commercial grounds rather than technical ones. SA2 expects that both the technical and commercial discussions will continue in parallel, and the eventual decision may fall under SA/GERAN plenary's mandate.

SA2 feels that it is within its scope to discuss and recommend actions in regards to the overall 3GPP architecture and its functional split. SA2 has not discussed the technical merits and disadvantages of any functional split, since GERAN has not agreed that a functional split change of the Gb interface to support conversational services is required.

Continued dialogue between SA working groups (SA 1, 2 and 3) and GERAN is desirable.

To address the architectural aspects of Gb evolution, SA2 proposes to keep a joint SA2/GERAN meeting. The current committee calendars show that an appropriate timeframe for such a meeting could be the second half of September.

If GERAN agrees that such a joint meeting is desirable, then SA2 would welcome the preparation of a detailed agenda. The objective of the joint meeting would be to provide agreed technical positions for the plenary level debate on Gb evolution.

SA2 has initially identified some items to be discussed at a joint SA2/GERAN meeting:

- Service examples
- Review of GERAN's FS from the architectural perspective
  - Understand the architectural impacts and set guidelines and principles
- Considerations on what can be done with
  - a) Iu mode
  - b) Optimised LLC/SNDCP
  - c) R'97 LLC/SNDCP
  - d) Dual Transfer Mode
- Type of mobile capabilities considered for the Gb evolution discussions (e.g. edge uplink / two timeslot transmit, etc...)
- Handover issues: selection of (non-congested) target cell, minimisation of interruption, etc...
- Security aspects, agreeing on the way forward

GERAN is welcome to add further points and refine the agenda.

### **3. Actions**

SA2 welcomes any clarifications and feedback from SA and GERAN on the points discussed above.

Additionally, SA2 welcomes any further information (date, agenda) on a possible SA2/GERAN joint meeting on its email exploder.

### **4. Date of Next TSG SA WG2 Meetings**

SA2 #27	14 – 18 October 2002	Beijing, China
SA2 #28	11 – 15 November 2002	Bangkok, Thailand