3GPP TSG RAN Meeting #19 ***Tdoc: RP-030129***
Birmingham, United Kingdom, 11-14 Mar 2003

Source: 3

Title: **Handling of Early Mobiles**

Agenda item: **9.9.11**

Document for: **Discussion & Approval**

---

1 Introduction

Discussion on "Handling of Early Mobiles" was started in TSG RAN, more than a year ago. But, currently there isno decision on the complete solution to address this issue. Considering that R99 terminals are already in commercial operation, it is crucial to ensure that the network elements are prepared to handle early mobiles as soon as any fault is observed and any agreement of the workaround reached in the standards.

The intention of this contribution is to urge TSG RAN to make a decision on a complete solution to address "Handling of Early Mobiles".

2 Discuss

2.1 Decision on the Content

Discussion on "Handling of Early Mobiles" was started in TSG RAN#14 with the main objective of smooth introduction of R99 mobiles. A great amount of discussion on different solutions to address the issue took place in the subsequent TSGs. Finally; it was agreed in TSG RAN#18 that a complete solution for handling of early UEs will consist of the following:

- Early Hooks included in some RRC messages over the Uu interface
- IMEISV or Bitmap derived from IMEISV sent from CN to RAN over the Iu interface

R99, Rel4 & Rel5 CRs, introducing the Hooks for RRC, were approved for the Uu interface at TSG RAN#18. Whilst agreement for a need for a solution on the Iu was reached during this meeting no agreement for the specific content to be passed over the Iu could be reached. In order to try and resolve this issue a dedicated RAN adhoc was held in January 2003. However, no decision could be made during the adhoc, on the exact content to be passed over the Iu interface. So currently, there is no complete solution on how to address the "Handling of Early Mobiles".

The adhoc did however agree (please refer to LS in RPA030014) on an IE "UESBI" to be included in RANAP. Technically correct CRs have been produced, for approval by TSG RAN#19, to implement this IE. However, it is not known as to:

a. What will be the length of the IE
b. What will the IE represent – IMEISV or Bitmap derived from IMEISV
c. What will be the semantics description of IE

Furthermore, it is apparent that until a fault is observed and captured in the standards that the RNC is required to ignore this IE if received from CN.

The impact on the network elements e.g. RNC, will vary widely depending upon whether the UESBI represents IMEISV or the Bitmap. The degree of this impact cannot be judged just based the rough knowledge of the IE as it is currently defined. It is, thus not possible to fully

prepare the network elements to address Handling of Early Mobiles, based on this IE as it is currently defined. eg. the need and location of any data base associated with the solution.

It takes time to prepare the network elements to address Handling of Early Mobiles. Thus, not making any decision on the content of the UESBI, at this stage, will further delay the implementation of a workaround after a mobile fault is observed.

TSG RAN has already taken almost a year without reaching any decision on the choice of the content over the Iu. It is not in the interest of the industry to delay a decision on the choice of the information to be carried over the Iu any longer, as resolution of any identified problems should be fast, and not delayed with further wrangling over the principle of the mechanism for the fault correction. The discussion in standards, after detecting a mobile fault, should be focussed on the workaround and not the means to transport the information.

The decision made by TSG RAN will also have bearing on the progress of the work by other groups e.g. CN and SA (refer to S2-030964), which means further delay if a decision is not taken now.

It is therefore necessary to make a decision now on the content of the UESBI in order to allow operators to prepare their network elements to handle mobile faults as soon as they are observed and agreement of the workaround reached in the standards. This is after all a mechanism for early UEs.

2.2 Decision on the Release

It has been proposed that the inclusion of the UESBI container should apply from Rel5. However, we would like to highlight the following points:

- R99 is functionally frozen but open for correction of critical faults. Handling of early UEs, in our view, is not a new functionality like LCS, HSDPA etc., to generate additional revenue or reduce the cost for operators. Instead, this is proposed to be a basic mechanism for handling of generic faults in early/R99 UEs.

- Considering R99 UEs are already in commercial operation, it is important that the mechanism is to handle the early UE is available in early release of 3GPP.
- We see no impact on implementations by including the mechanism in R99 spec, if a particular implementation doesn't want to support the mechanism in R99.
- Early UE handling is part of the R99 Uu interface. Therefore, we feel that, due to the importance of this mechanism for operators, the signalling support on the Iu interface should also be available for R99 networks.

In view of the above, we propose that the mechanism be implemented in R99.

3. Conclusion

Considering that R99 mobiles are already in commercial operation, preparation of the network elements to provide a solution to address Handling of Early mobiles is increasingly important for operators.

In order to prepare these network elements, it is necessary to know the content of the UESBI, and any associated impact on network architecture. It is therefore crucial that TSG RAN make a decision on the choice of the content for UESBI now, rather than waiting for mobile faults to be observed.

It is proposed that

- TSG RAN#19 make a decision on the choice of the content of UESBI.
- The mechanism be implemented in R99 and ask RAN3 to prepare corresponding CRs.
- Liaise with CN and SA groups of the decision.