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Introduction

The S2 ad hoc group on R00 has finished a TR [1] regarding an all IP architecture for R00 (denoted **R00AIP** in this contribution). This contribution brings up some points, which need to be clarified and discussed before the SA plenary can approve the TR.

Discussion

What is new?

The R00AIP fails to clarify what R00AIP adds in terms of functionality and benefits as compared to R99. As an example, Section 4.1 starts with the following text:

“ The aim of the all IP architecture is to allow operators to deploy IP technology to deliver 3rd Generation services, that is an architecture based on packet technologies and IP telephony for simultaneous real time and non real time services. “

After having read the complete Section 4.1, the question a reader must ask is: what does R00AIP support that is not supported by the R99 PS domain, which uses IP transport as well as supports IP telephony via the mandatory H.323 protocol? Only one issue is clearly differing from R99, and that is that the R00 PS domain also can support R99 CS domain terminals.

Another example is found in Section 4.3:

“ The standards shall allow mobile terminated communications to be routed to the user’s terminal on the basis of a single identifier e.g. MSISDN. This does not preclude multiple addresses being used for different services and capabilities (e.g. data, Fax, SMS).”

The above functionality is already included in R99, as decided at the S2 meeting in Bonn.

Many more examples can be found in the R00AIP, where many parts relate to R99 features and not R00.

Where is IP in R00AIP?

The scope for the technical report is, as stated in Section 1:

“This technical report will propose an architecture that provisions an all-IP architecture option for release 00. The purpose of the technical report is to

- identify key issues and affected ongoing 3GPP work that need to be resolved and
- propose a high level work plan for completion of an all IP release 00 UMTS standard”

However, essential issues in relation to IP are lacking in the report. For example, in order to provide an all IP solution, a key issue is that the transport in the *whole* network is performed according to standard IP solutions. This includes of course also the RAN, such as UTRAN. However, R00AIP does not mention this issue at all.

Another, clearly IP related issue, which is only mentioned briefly, is the already defined work item in S2 concerning the use of Mobile IP in UMTS [2]. How does this relate to the architecture in R00AIP?

Time Plan

Currently, the R99 work is finished under severe time constraints. Due to the limited time allocated to finish the R99 specifications, meetings take place every second week, and contributions are distributed in conjunction with the presentation at the meeting.

At the same time as finishing R99 under severe time constraints, R00 is defined under similar conditions.

The resulting specifications do not benefit from this working method.

With the above in mind, it is important that the work plan for R00 is set according to the amount of work which needs to be done.

Before a full work plan can be specified, the overall work load has to be clarified. This contribution has shown that many critical issues regarding R00 are not clarified.

Note also that the R00AIP report only describes a subset of an expected R00 work plan. No decision on R00 can be taken by SA Plenary by only covering a subset of the total system, ie the architecture isolated from the services and system requirements and from the RAN perspective.

Proposal

It is proposed that:

1. The TR [1] is modified according to the comments in this contribution:
 - It should be clearly stated what is new in R00.
 - Backward compatibility with R99 and present work in 3GPP should be included in the R00 aspects.
2. A group within 3GPP is formed with the task of forming a Stage 1 description (including architectural aspects) of the whole R00. When the requirements and functionality of R00 is known, this group should propose a detailed work plan. The results should be approved at the SA#7 meeting in March 2000.

References

- [1] 3GPP TR 23.xyz “3GPP; TSG Services and System Aspects; Architecture for an All
- [2] 3GPP TR 23.923 “Combined GSM and Mobile IP Mobility Handling in UMTS IP