

Title: Liaison Statement on the UMTS Evolution of GTP

Source: TSG-N WG2

To: TSG-RAN WG3

Cc: TSG-S WG2, TSG CN

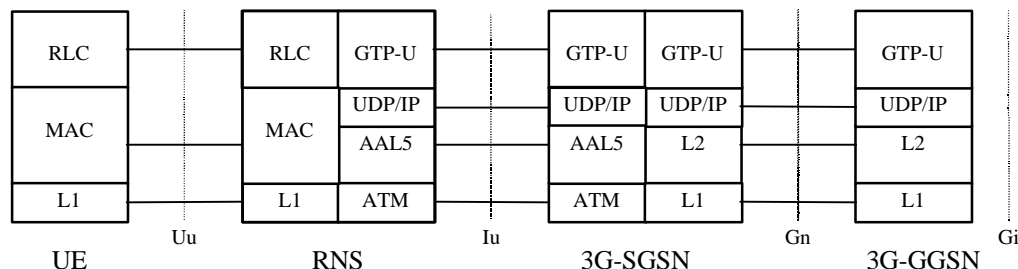
INTRODUCTION

This LS proposes a way on how to coordinate the work on an evolved GTP specification for UMTS. In UMTS, the user plane part of GTP shall be used over the Iu reference point as well as over the Gn/Gp interface and, therefore, this work concerns both TSG-N WG2 and TSG-RAN WG3.

BACKGROUND

In TSG-S WG2 it has been decided that for UMTS, an evolved version of the GTP specification (GSM 09.60) shall be used for user data packet tunnelling over both the Iu reference point in the user plane and over the Gn/Gp interface. What TSG-S WG2 has decided in more detail is that:

- A tunnelling protocol is used on top of the common layer 2. This tunnelling protocol corresponds to an evolution of the user plane part of the GTP protocol used in GPRS put on top of UDP/IP.
- The user data plane in the UMTS network is made up of two tunnels:
 - a first IP/UDP/GTP tunnel between RNC and 3G SGSN on Iu
 - a second IP/UDP/GTP tunnel between GGSN and 3G SGSN on Gn



Note: GTP-U denotes the user plane part of GTP. Protocol layers above RLC and GTP-U are FFS

Figure 1: Protocol Architecture of the PS User Plane

Within 3GPP, TSG-N WG2 has been given the responsibility for the maintenance and the evolution of the GTP specification.

PROPOSAL

Considering the above and that TSG-N WG2 seeks an efficient way to handle the work on an evolved GTP specification for Release 99, TSG-N WG2 proposes the following way forward.

- Since in UMTS GTP-U will be used over several interfaces with different responsible bodies there is a definite need for coordination between the concerned working groups, that is, TSG-RAN WG3 and TSG-N WG2.
- There shall preferably only be one single version of the Release 99 specification of GTP, which shall be used over both Iu (GTP-U) and Gn/Gp in UMTS, and over Gn/Gp in GSM/GPRS.
- TSG-RAN WG3 contributions to the GTP-U work is seen invaluable by TSG-N WG2. TSG-N WG2 proposes that joint GTP-U Ad hoc meetings be arranged, whenever appropriate, to speed-up the progress and to ensure good coordination between the groups.
- TSG-N WG2 proposes that the actual work is carried out by producing formal CR's to Release 98 of the GTP specification, which is the base line document for UMTS Phase 1, to form the Release 99 of GTP.
- Since GTP-U is a 'transport layer protocol' (i.e. at the same level as AAL2 connections) in the Iu protocol architecture, TSG-RAN WG3 should just reference the GTP specification in the Iu user plane specification (compare with references to IP, UDP, AAL2, etc).
- TSG-N WG2 is willing to take the responsibility of GTP protocol, including the GTP-U, if this is acceptable for TSG-RAN WG3.
- TSG-N WG2 also sees a need for coordination between the two working groups regarding the control plane issues, e.g. with respect to the establishment and release of GTP tunnels on Iu.