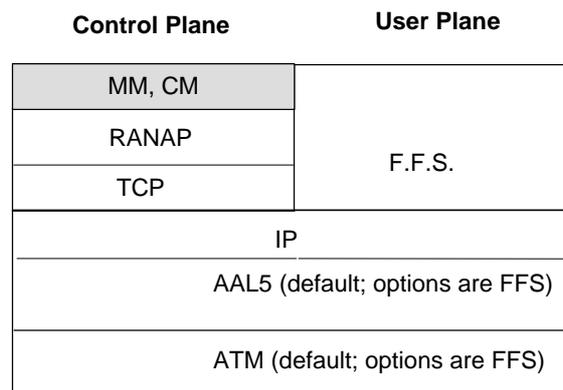


Agenda Item: 7.5, 12.1, 13.4
Source: Telia
Title: Iu transport for the packet domain
Document for: S3.10, S.3.14, S3.12

1. Introduction

In the previous RAN-WG3 meeting it was agreed to include IP in the protocol stack for the user plane of the packet domain. The right hand part of Fig 1 below was taken as an initial working assumption. The left hand part of Fig 1 (control plane) was not agreed.



 UE to CN communication

Figure 1: Iu protocol stack for the packet domain

It is clear that the statement within parenthesis of the L1-L2 transport layers in Fig 1 require some clarification. This needs to be reflected in the documentation.

2. The advantages with IP for L1-L2 transport

One of the advantages with IP is its ability to be transported by many different technologies (e.g. ATM, Frame Relay etc.). In order to benefit from the rapid development of transport technologies, there may be no need to specify the lower layers (L1 and L2) when IP is used. IETF specifications already exist for the mapping of IP to transport layers such as ATM, Frame Relay, Ethernet, PPP, and the development continues in a fast pace. This will allow the operator to choose L1-L2 technology freely, depending on the requirement from the operator itself and its customers.

RANAP needs to be specified with a generic interface to the lower layers in order to support TCP (or UDP) transport for packet domain and perhaps SS7 transport for the circuit domain.

Using IP, there is no need to freeze the choices of L1 and L2. Instead, one can benefit from the rapid development of transport technologies, at least for future UMTS releases (beyond phase I). It may be advantageous however that IP is used both in the user and control planes. This could also simplify the deployment, e.g. in business environments.

3. Proposals

1. The following text should be added in S3.10, ch. 4.2 and/or in S3.14, ch. 6.1:
 - ATM and AAL5 shall be supported as the default L1 and L2 transport layers. Other transport layers are allowed as options in the standard.
2. The following text should be added in S3.10, ch. 4.2 and/or in S3.12, ch. 5.1:
 - Signalling in the control plane shall not depend on the specific choice of transport layers, e.g. ATM and AAL5.