

TSG-CN Plenary # 10
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Agenda Item : 8.4 Enable bearer independent CS architecture
Subject: Inter-Call Server Protocol
Source: Nortel Networks

The objective of UMTS standardisation is to allow UMTS networks to be built using equipment from different vendors and to allow interoperation between different UMTS networks. This goal must be achieved in a way that still allows networks to meet their individual design objectives, and doesn't restrict the integration of UMTS components with other network elements.

In order to meet these objectives the principle applied in GSM and UMTS has been to specify the protocols that are specific to UMTS, but to leave open elements that are separate from the UMTS system. For example UMTS does not specify the layer 1 transmission technology to be used in the core network. In the CS-domain the inter-MSC signalling protocol is not specified. Though ISUP is often used as a model real GSM networks make use of a variety of signalling protocols depending on local factors.

In the case of the bearer-independent CS architecture the choice of inter-call-server signalling should not be constrained by the UMTS standard. One of the benefits of evolving the CS-domain to a packet network is to allow greater commonality between wireless and non-wireless networks. This implies that MSC-call servers will be deployed in to networks that contain a variety of other types of call server including virtual-transits and line-access call servers. In this case the deployment of UMTS may not be the key factor in the choice of inter-call server protocol.

As call-server based networks are new it can also be expected that technology used for inter-call-server signalling will evolve and change over the next few years. In the PSTN analogue signalling was rapidly replaced by TUP and then ISUP. A standard defined at the beginning of this process which required the use of analogue signalling would have been left stranded.

Providing flexibility in the choice of inter-call-server signalling is necessary to:

- Allow for evolution in this new technology area
- Allow UMTS to be deployed in networks which also contain other types of call server

It is recommended that:

- CN plenary reaffirms the approach in N4 that design of the bearer-independent CS-architecture should be decoupled from the choice of inter-call-server protocol.
- The stage 2 description for the bearer-independent CS-architecture should not assume a specific inter-call-server protocol.
- The need for 3GPP to produce separate stage 3 documents in this area should be evaluated.
- If stage 3 document(s) are produced for a set of inter-call-server protocols this should not prevent additional protocol alternatives being introduced later.