

Source: Drafting Group (presented by Nortel Networks)
Title: Vision and Road-Map for UMTS Evolution
Document for: Decision
Agenda Item: 6.1 & 7.6

Discussion

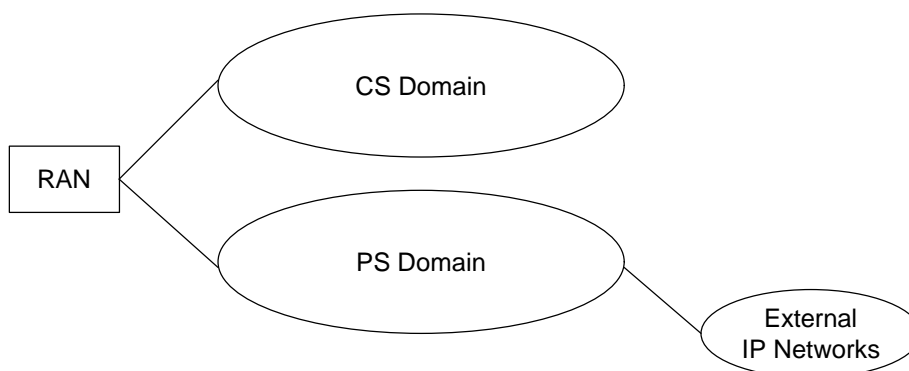
TSG SA needs to set a clear vision and road-map for UMTS evolution so that work on R00 and subsequent releases have a sound basis for their development. Backwards compatibility is required between phases. However it is also important that UMTS can incorporate new technology in a non-disruptive manner.

This document proposes this vision in very high-level terms of service requirements and their mapping on to a high-level core network architecture.

UMTS Release 99

Service drivers:

- Compatibility with GSM
- Access to high-speed data services
- Managed QoS



Release 99 Architecture

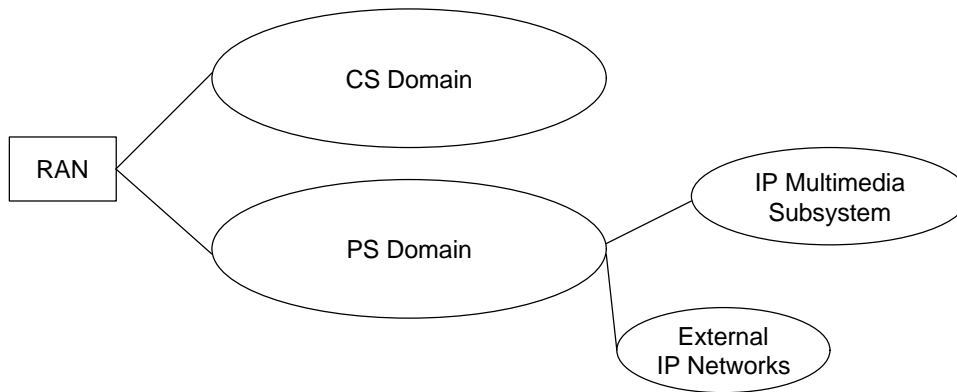
The CS-domain provides circuit-oriented services based on nodal MSCs (an evolution of GSM).

The PS-domain provides IP-connectivity between the mobiles and IP-networks (an evolution of GPRS)

Medium Term Vision (Starting R00)

Service drivers:

- Compatibility with Release 99
- Addition of IP-based multimedia services
- Efficient support of Voice-over-IP-over-Radio for the multimedia service, but not necessarily fully compatible with the telephony service and its supplementary services.



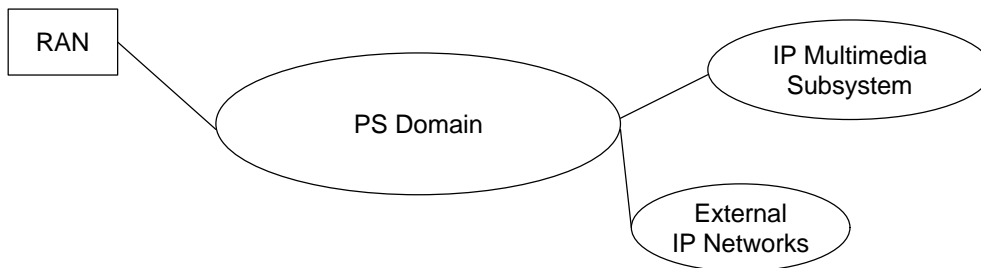
Medium Term Architecture

The CS-domain is retained and provides 100% backwards compatibility with R99 for CS-domain services. The CS-domain may be implemented using MSCs, or possibly with MSC Call Servers and a packet-backbone. The PS-domain is retained and provides IP connectivity. It is upgraded to support QoS for IP-multimedia services. The IP-multimedia subsystem is added. In the medium term this subsystem provides new IP multimedia services that complement the services provided by the CS-domain. These services are not required to be aligned with the CS-domain in the medium term.

Long Term Vision

Service drivers:

- Migration of many users to IP-multimedia services
- Wide-spread adoption of IP-multimedia outside UMTS



Long Term Architecture

The IP multimedia sub-system has evolved to the extent to where it can substitute for all services previously provided by the CS-domain.

The PS-domain is retained.

The CS-domain is phased out.

Proposal

TSG SA is asked to endorse the road-map above as a road-map for the evolution of the UMTS system. It shall also serve as a guidance on how to interpret TR 22.976.