Technical Specification Group Services and System Aspects
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Title: **Architecture model for Release 2000**

Document for: **Information / Discussion**

Agenda Item:

Introduction

During the last S2 meeting, lots of contributions are presented as the architecture models for the release 2000 network. These models are based on the layered architecture, where a clear separation is made between the Service level, the Call Control level, and the Bearer level.

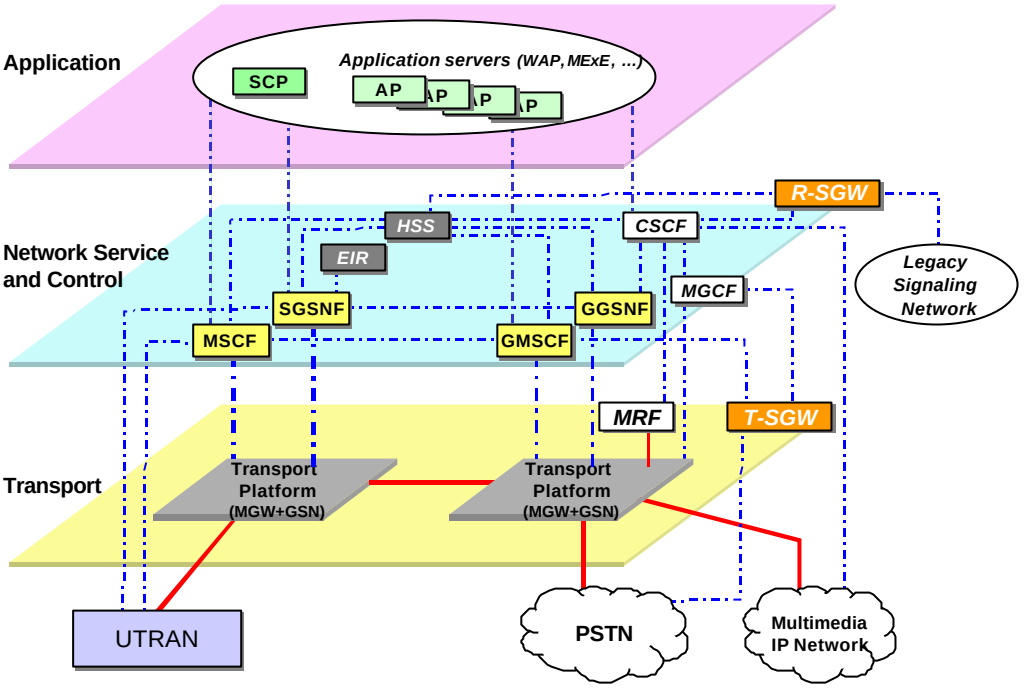
This contribution introduces a layered architecture model for Release 2000. The delegates of SA2 have agreed on a principle of 'decomposition of network function'. However, the objective of the separation of call/session, mobility and service control is not yet clearly defined. Following the architecture principle, it is proposed that session and mobility control function be separated from transport platform, and define a new network elements; GGSN server and SGSN server.

Architecture model for Release 2000

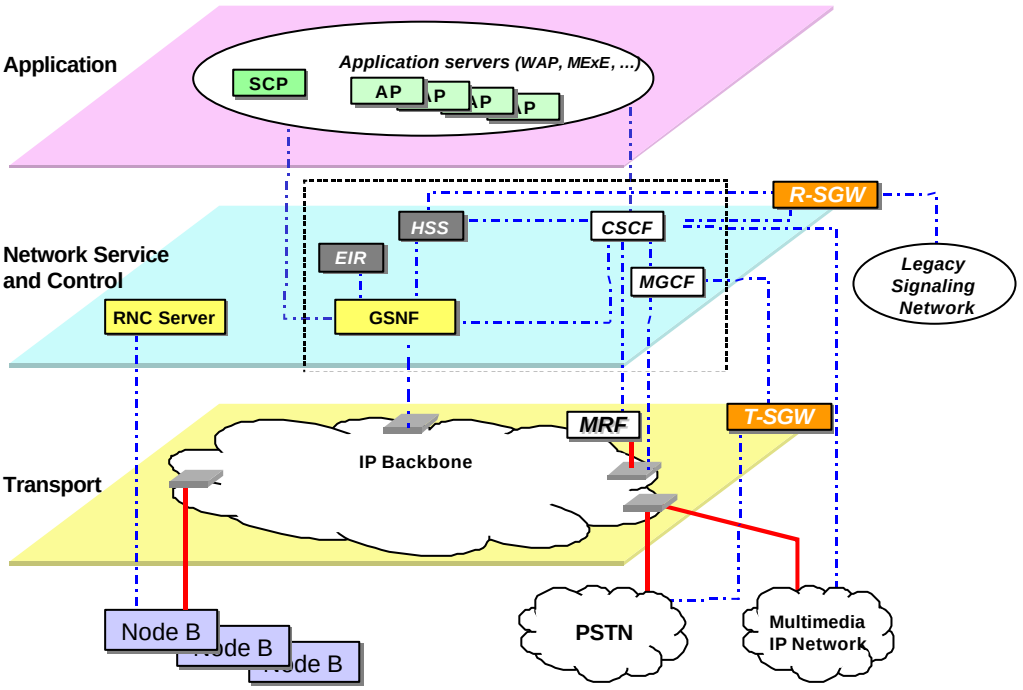
Based on the architecture principles of R'00, this contribution introduces a layered plane architecture, where a separation is made between 'Application Plane', 'Network Service and Control Plane' and 'Transport Plane'. This architecture model can provide transport independence, owing to the decomposition of network function.

Most of previous contributions are mainly focused on the separation of CS call control function and mobility control function from transport platform. As the importance and the complexity of the functions are growing, packet control block needs more intelligence and flexibility to support various types of services. Here, we propose that packet session control function and packet mobility control function be decomposed.

The switching platform can be whatever with any combination of transport technology. It means that this switching platform can be operated as MSC, GMSC, SGSN, GGSN and Media Gateway. Because of the transport independence, it can be easily evolved into All-IP network.



Reference architecture model for Release 2000



Long-term All-IP architecture example

Discussion

Following items shall be discussed

- Separation of Session and Mobility control functions from 3G-GSN functions.
- Adding the new network elements – GGSN Server, SGSN Server

After discussion, this architecture model would be possibly proposed as the architecture model for R'00.