

3GPP TSG RAN #11,
13-16 March 2001, Palm Springs, CA, USA

RP-01-0214

Summary of the email discussions on UTRAN Architecture Enhancements

Convenour for the Email discussions:
Antti Toskala
IP Mobility Networks
Nokia Networks
Espoo, Finland

Background

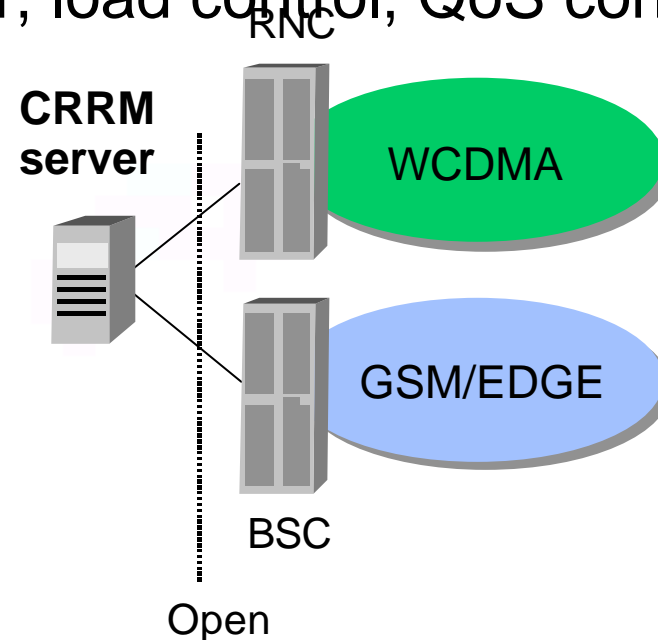
- The following study groups were agreed in UTRAN Evolution work shop in February in Helsinki:
- **A. Architecture group**
 - **Operability of the network (to avoid RNC to be the single point of failure).**
 - **Synergies and economics of scale, convergence to widely used protocols**
- **B. Individual study 1: Macro Diversity combination location**
- **C. Individual study 2: Multiradio Support**
- **D. Individual study 3: Reduced delay/processing in UTRAN**
- **E. Individual study 4: Open UTRAN Management**

Proposal made for Architecture Group on Control and User plane separation

- The major control plane functions of the SRNC are:
 - ? Terminate RRC towards the UE
 - ? Terminate RANAP towards the core network
- If these functions are separated from the user plane and placed in separate servers, the following benefits can be achieved:
 - ? Decoupling of load on control and user plane
 - ? Flexible distribution of control plane load onto several servers (including load balancing)
 - ? Robustness due to the availability of a pool of servers
 - ? Fast and flexible updating of the network's control plane computational power by adding or removing new servers (versus upgrading each individual RNC)
 - ? Independence of relocations in the user plane from relocations in the control plane (e.g. in order to minimise relocations in the control plane without forcing user plane traffic to take non-optimal routes)

Proposal made for Multiradio support Group on Common Radio Resource Management

- New network element, the Common Radio Resource Management server (CRRM Server), was proposed as a new logical node in UTRAN and GERAN.
- The purpose of the CRRM Server is to collect resource management functionality that can be related to multi-system functionality, so that this can be processed in the same algorithm (i.e. handover, load control, QoS control, etc).



Way Forward

- On the proposals (in general) for architecture enhancements, following possibilities were proposed in the workshop
- Handling of the proposal in RAN WG3 or handling them in a separate RAN level architecture group.
- TSG RAN should decide the way to proceed on this issue
- The proposal made so far e.g. control and user plane separation and CRRM server can be handled independently of each other since latter affects only control plane and thus the separation is not an issue for that.