Title: Proposed   General   Requirements   for   IMT-2000/UMTS   Network Standardization

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Agenda point: 10
Purpose: Discussion

1. Introduction

When 3GPP starts to work on the actual technical specifications, general requirements for IMT-2000/UMTS network standardization need to be clarified. This contribution proposes some general requirements from the operators' point of view. Although this contribution may not provide a complete list of requirements, the proposed requirements shall be the basis for further technical discussions.

2. General Requirements

This contribution proposes that the standardization work shall be at least based on the following requirements.

1)   GSM/GPRS evolved core network

As agreed in 3GPP, core network protocol shall be based on GSM/GPRS evolution. Also, backward compatibility with GSM/GPRS needs to be guaranteed.

2)   Common Mobility Management shall be used for CS/PS traffic over air I/F and intra core network

Common mobility management accomplishes an efficient CS/PS integrated node, if an operator desires to introduce integrated nodes. Also by using common mobility management, signalling load can be optimized effectively. Therefore, Common Mobility Management between CS and PS shall be used over both air interfaces and intra core network interfaces with a common subscriber data management.

3)   New Technologies (e.g. ATM, IP, and UIM) can be introduced based on Phase1 specifications

It is very important for operators to introduce state-of-the-art network technologies from the initial stage of IMT-2000/UMTS. These technologies enable operators to utilize network resources effectively, lower infrastructure and operation/maintenance costs, and provide attractive services which conventional technologies can not support. Therefore, phase 1 specifications shall allow operators to introduce new technologies.

4)   Transport technologies shall be operator's selection

Since the most suitable transport technologies are dependent on each operator's environments, transport technologies shall be operator's selection.

5)   O&M specifications shall be standardized

From the viewpoint of the necessity of providing multi-vendor environments, O&M specifications shall be standardized. However, since operator dependent O&M requirements may exist, specifications should be able to be expanded flexibly according to operator specific requirements

6)   Iub shall be standardized

From the viewpoint of the necessity of providing multi-vendor environments, Iub specifications shall be standardized. However, since operator dependent O&M requirements over Iub may exist, specifications should be able to be expanded flexibly according to operator specific requirements

7) Ubiquitous operator specific services with operator specific services usage in visited networks can be offered through introducing VHE mechanisms under multi-vendor environments

It is quite essential for an operator to start offering its own specific services nationwide and timely at the same time with operator specific service usage in visited networks in order for each operator to be differentiated even though the operator's networks consist of various vender products. These environments will be provided through introducing VHE mechanisms.

8) As a target architecture IP based core network and radio access network with ATM transport can be considered to be a valid option

The target architecture may be ATM-based IP network from core network part to radio access network part. However, it is very difficult to assume only one solution at this moment. Therefore, IP based network can be considered to be a valid option.

3. Proposal

This contribution proposes that 3GPP defines a general requirements document so that major general requirements, which can be used as the basis for further technical discussions, could be accumulated. Also, it proposes that general requirements mentioned in section 2 are included in the proposed document.