All IP option for Release 2000

This slide set presents S1 initial view on all IP
option for release 2000, all issues are subject to
further study

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Version 1.1

TSG SA WG1

Release 2000 content

- Release 2000 will include PS domain (evolved from GPRS) providing full set of real time and non-real time services (incl. Multimedia IP call).
  - Note: This is referred as "All IP-option".

- Release 2000 will include CS domain with all services specified already for release 1999 and possible enhancements
  - Note: This presentation does not include new CS domain requirements for rel 2000

Introduction

- The aim of the all IP architecture is to allow operators to deploy IP technology to deliver 3rd Generation services, that is an architecture based on packet technologies and simultaneous real time and non real time IP services including telephony and multimedia. This architecture should be based on an evolution from Release 99 specifications and should be compatible with IMT-2000, providing global terminal mobility (roaming).

- The characteristics of the all IP network
  - Integration of mobile telecommunications and Internet
  - Packet transport using IP protocols
  - IP based call control protocols
  - IP client enabled terminals
  - Real time IP capable radio access network (UTRAN/EDGE) and also other access means including Cable and HIPERLAN

Key High Level Requirements

- Optimized and flexible offering of Internet compatible multimedia services

- Support of existing Internet services
  (WEB browsing, email, e-commerce,…)

- Existing basic and supplementary services of release '99
  (Need for set of basic and supplementary services is for further study)

- Existing basic and supplementary features of release '99

- Additional specific packet based features

- Service offering shall be based on general principles of VHE

- All regulatory requirements will need to be supported
  - Emergency calls (with location information)
  - Number portability

3GPP

Roaming and Handover

- Existing requirements for release 99 need to be supported

- Large variety of roaming scenarios need to be supported between 2G and 3G networks
  - Details FFS

- Handover for compatible services needs to be supported between 2G and 3G networks
  - Details FFS

- Service continuity between PLMN and Internet needs further study.

Support of existing services

- The standards shall enable the All-IP core network to support the existing (R99 and before) services/capabilities in a manner that is transparent to the users of these services.

- The network needs to provide the service capabilities required in such a way as to support interworking of services between the all IP network and the other networks (GSM pre Release 99, UMTS release 99).

- The support of existing services shall not preclude the new service capabilities through the use of an all IP architecture.

- Some compromises between new the functionality and the backward compatibility might be needed

Issues need to be studied by S1

- Understanding and definition of high level architecture for service creation and provisioning

- Service continuity, Handover and Roaming

- Applicability of existing CS telephony requirements and dual system interworking scenarios

- The relationship of GSM supplementary services and VoIP supplementary services (e.g. H.450.X)

- Security (S3 focus area), Charging(S5 focus area)

- The need for the standards to enable support UMTS R99 CS and/or PS terminals (by the operators who deploy only the All-IP core network option) need to be further studied.

- Detailed documents structure

S1 ad hoc on all IP

- S1 will have an ad hoc group looking at all IP requirements for release 2000

- For email discussions you may join to S1_IP@LIST.ETSI.FR