

**Source:** AT&T, BT, BCellnet, Ericsson, Intel, Lucent, Motorola, Nokia, Nortel Networks, Siemens, Telenor, TIM/CSELT

**Title:** Contents and timing of the next release following release 99

**Document for:** Decision

**Agenda Item:** 6.7

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## **1. Background**

Work on the first release (Release 99) of specifications for the initial phase of the third generation mobile system is now well advanced, with a target completion in December 1999. The development of service and architecture requirements for Release 99 now needs to stabilise so that the stage 3 work in other TSGs can be completed. To ensure that there is sufficient time to develop specifications for the next release of the specifications, work on the requirements for the next release needs to start soon, in particular within the Services and Architecture Working Groups.

This contribution proposes a target content and timing for the next release of specifications, taking account of a desire by a number of operators and suppliers to develop an all-IP (Internet Protocol) based option for the network architecture.

## **2. Content of next Release**

Release 99 specifications are based on UTRAN together with an evolved GSM core network, which comprises both circuit switched and packet switched (GPRS) components. This approach has reduced the development risks in the core network by building on existing technology investments. A number of operators and suppliers now wish to develop an all-IP based architecture for 3<sup>rd</sup> Generation Mobile; that is an architecture based on packet technologies and IP telephony for simultaneous real time and non real time services. This architecture should be based on an evolution from Release 99 specifications.

The benefits of this approach include

- Ability to offer seamless services, through the use of IP, regardless of means of access
- Synergy with generic IP developments and reduced cost of service
- Provides an efficient solution for simultaneous multi-media services
- Provides the capability for a much higher level of control of service

It is therefore proposed that the next release of specifications should support the implementation of an all-IP based architecture. In particular, this will require development of the specifications in specific areas. The key developments required include:

Quality of service (QoS) developments to support real time services including speech,

Advanced service control for IP based services including basic telephony and multimedia services

Introduction of gateway functions for connection to circuit switched networks.

A range of associated developments will also be needed to support this architecture approach

### **3. Timing of next release**

The timing of the next release should be set at December 2000, following one year after the initial release. The release is here referred to as Release 00. This timing will allow for a range of improvements to be included, and allows sufficient time for development of an all IP based architecture. A release in this timeframe would also allow operators the choice of implementing an all IP network from service launch, without the need to invest in a circuit switched solution.

It is also expected that Release 00 will include a number of problem fixes for Release 99, and a one year cycle allows for problems to be found and corrected, whilst not delaying implementation of the fixes too long.

### **4. Recommendations**

It is important for 3GPP to set out a clear target for the next release, defining expectations of the capabilities and timeframe for the continuing development of the 3<sup>rd</sup> generation mobile system. It is recommended that 3GPP-SA should;

- (i) Agree that the target date for the next release (Release 00) should be December 2000.
- (ii) Include the specification of an all-IP based architecture option, evolved from GPRS, within the target scope of Release 00.
- (iii) Inform the PCG and other TSGs of these targets for the next release
- (iv) Ask TSG-SA Working Groups to propose work plans to deliver an all-IP architecture, including setting out timeframes for the stage 3 work in other TSGs.