Technical Specification Group Services and System Aspects   **TSGS#10(00)0617**
Meeting #10, Bangkok, Tailand, 11-14 December 2000

Source:	**Nortel Networks**
Title:	**Service Interworking for IM Subsystem**
Document for:	**Decision**
Agenda Item:	**8.9**

Introduction

The IP Multimedia Subsystem (IMS) is being specified to bring service capabilities from the IP world in to UMTS. The IMS must provide operators with innovative services to enhance UMTSs' appeal to end-users and generate incremental revenue.

The focus of IMS is clearly on exploiting the possibilities offered by IP multimedia technology. However this must be done in the context of legacy technologies (such as the PSTN) which will continue to serve many users. The IMS should also able to satisfy a user's complete communication needs. Some operators will wish to cap their investment in CS-domain technology when they introduce the IMS.

Service Interworking Requirements

One service provided by the IMS should be a SIP-based voice service. Obviously this service can be used between IMS users[1]. However in many cases IMS users will want to also involve users of the CS-domain or PSTN in conversation. In this case the IMS will have to interwork IMS services to legacy services.

Service Interworking Complexity

Basic interworking of IP-telephony (SIP or H.323) to PSTN is a relatively straightforward task and is already available in Enterprise and Internet telephony systems. However there is a risk that if too much effort is applied to providing very complicated interworking scenarios then this would distract from the goal of providing attractive new services in the IMS. Therefore the UMTS standards should enable interworking for the most important scenarios (which need to be identified). It should also be possible for individual networks to support more sophisticated interworking scenarios, but standardisation of these should not be a high priority for release 5.

Conclusion

This paper makes the following recommendations:
- Users should be able to meet all their communications needs (including voice) thought the exclusive use of the IMS.
- The IMS voice service should include the capability to place calls to and receive calls from legacy users on the CS-domain and PSTN
- The level of legacy interworking standardised by 3GPP needs to be decided bearing in mind the importance of the legacy environment, but also the key requirement for the IMS to provide innovative and differentiated services.

3GPP plenary are asked to endorse these points and ask the sub-committees to update the scope and work-plan for the IMS accordingly.

---

[1] In this paper an "IMS user" is a user making use of the IMS for a particular communication session.