Technical Specification Group Services and System Aspects Meeting #22, Hawaii, USA, 15-18 December 2003 **TSGS#22(03)0729**

Source: **Vodafone**
Title: **Priority Services**
Document for: **Approval**
Agenda Item: **7.1.3**

Introduction

SA 1 has been working on "priority services" for a long period. Vodafone's understanding of this work was that it intended to address US requirements. Because Vodafone has no GSM networks within USA, Vodafone did not participate in the SA 1 work, instead, Vodafone waited for SA 1 to follow the 3GPP working procedures and to provide requirements to the stage 2 and stage 3 committees. Vodafone's intention was to participate in the stage 2 and 3 work to ensure that the solutions were technically correct and did not pose onerous burdens on non-US operators.

Current Situation

It now appears that SA 1's priority service drafting group has been working on complete stage 1, 2 and 3 solutions. This is demonstrated by the contents of TR 22.952 which is submitted to this meeting in SP-030709 for approval.

Interaction with other committees has been limited to LSs that have not attracted either the interest or attention of many delegates.

At the SA 2 meeting in Bangkok, Vodafone raised some of these concerns and issues with the technical content of the TR. During this discussion, the SA 1 prioirity services delegates were invited into the SA 2 meeting. This "pseudo joint session" resolved a couple of issues but left others outstanding and raised new ones.

Problem

The basic problem is that the TR has not been properly reviewed by the main stage 2 and 3 WGs. As a result, it may contain items that pose significant threats to non-US operators, especially, if non-US regulators blindly copy US regulators.

Proposed Way Forward

Vodafone understand that US operators may need this TR to be approved quickly. Hence it is proposed to modify the TR's scope to clearly limit its applicability to the USA (or North America). It is proposed that the following modification is made to the scope of TR22.952:

1 Scope

This present document addresses the Service Aspects (Service Description), Network Aspects (Call Flows), and Management Aspects (Operations, Administration, Maintenance, and Provisioning) of Priority Service, based on existing 3GPP specifications. This present document is only applicable to North American networks. Further review of this document is required before it is made applicable to any network outside of North America.

The Priority Service is intended to be used for both Voice and Data. However, this document only addresses Circuit Switched Voice Service. Data, multimedia and non-circuit switched aspects of Priority Service have not been addressed and are for further study.

The Priority Service is intended to interwork with external networks to provide an end-to-end service. Therefore, service interactions with external networks are considered within the scope of

this document, although the specification of these interactions may be in another standard. If this occurs, a reference to that specification is made.

Annex: some examples of probable problems with the TR

This list is not intended to be exhaustive

1) "9 times overload"
During the SA2 meeting in Bangkok, an SA 1 delegate verbally stated that the TR was meant to describe how to cope with a "9 times overload" situation. However, there does not seem to be anything in the TR to describe how a VLR can cope with 9 times the number of subscribers which it normally handles. Obviously, it can be argued that "this is not what was meant", however, 50% or 100% VLR overload should be considered (specifically, how to ensure that the priority subscribers are not purged from the VLR).

2) access class control
This is mentioned in the TR, but, nothing useful seems to be said about how to use it in the BSC.

For example, to cut load by 10%,

should class 1 be barred in cell 1; class 2 be barred in cell 2; class 3 be barred in cell 3, etc?
or,
should class 1 be barred in all cells in the BSC? (In which case, is inter-BSC signalling need to co-ordinate this across BSC boundaries?)

3) interaction with packet services
Networks may "reserve" several traffic channels per cell for GPRS. Should Priority Service voice calls be allowed to use these? If so, how does this interact with a fire engine using GPRS to download a map of the building on fire? The TR does not seem to address this important issue of CS-PS interaction.