Title:	**LS on terminal and network revision interoperability problems**
Response to:	-
Release:	R99
Work Item:	-

Source:	3GPP TSG GERAN
To:	GSMA Board
Cc:	3GPP TSG CN1

Contact Person:
Name: Antti O. Kangas
Tel. Number: +358 40 5170103
E-mail Address: **antti.o.kangas@nokia.com**

Attachments: -

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1. Overall Description:

TSG GERAN has become aware of certain interoperability problems between R99 UE's and legacy network equipment. These problems have been encountered during the course of testing both GSM/WCDMA and EGPRS-capable UE's against live networks.

The following specific problems in the network equipment implementation have been identified :

2. Revision level in MS Classmark:

Three different values have been defined for UE revision level. These are GSM phase 1, GSM phase 2 including GSM phase 2+, and R99 and later. GSM phase 2 and phase 2+ specification (04.08) defined two code points in revision level field in MS Classmark: One for GSM phase 1, and the other for GSM phase 2. All other code points were defined to be 'reserved for future use' from GSM phase2 until GSM phase 2+ R98.

A third code point, 'Used by mobile stations supporting R99 or later versions of the protocol', was defined first for R99. Some GSM ph. 2, R96, R97 and R98 network implementations either perform a fallback to GSM phase 1 functionality or completely fail to provide service to a UE which indicates a later (R99) revision level, such as the code point allocated for R99 and later UE. The reason is that the network considers it an error when a UE indicates to the network its support of this later version of the protocol.

3. The length of the Quality of Service IE between R97 and R99 implementations

The Quality of Service IE was initially defined in R97 specifications (04.08) as a type 4 TLV coded IE but with fixed length of 5 octets. Subsequently, the length of the IE was extended to maximum 13 octets in R99 and further on to 14 octets in Rel-5 (24.008). Some types of R97 SGSNs do not accept new length for this IE which used to be fixed in R97 reference version. Such SGSN will diagnose an erroneous mandatory IE and consequently can not support GPRS procedures for PDP context activation or PDP context modification for R99 UE.

4. Incorrect TBF assignment message termination

It has been found out that there are R97/R98 BSS in commercial use that incorrectly terminate a TBF resource assignment message, leading to the situation in which a correctly implemented R99 UE will see that the message contains R99 extension assigning an EGPRS TBF to the UE. A R99 UE supporting EGPRS will accept the message and establish an EGPRS TBF, whereas a R99 UE not supporting EGPRS will reject the message due to incompatibility between the MS capability and the assigned TBF mode. In either case, the TBF operation fails and leads to a situation in which GPRS cannot be used at all.

5. Actions:

TSG GERAN asks the GSMA Board to note the detected interoperability problems and consider actions to correct the situation. TSG GERAN appreciates the challenge of installing corrections to every existing piece of affected network equipment, but stresses the fact that such interoperability problems need to be solved in order to facilitate the deployment of commercial R99 UE's.

6. Date of Next TSG-GERAN Meetings:

TSG GERAN #14	7-11 April 2003	Munich, Germany
TSG GERAN #15	23-27 June 2003	To be defined
TSG GERAN #16	25-29 August 2003	To be defined

Title: **Liaison statement on error handling in Pre-R99 networks**

Source: **TSG CN**
To: **GSMA Board, GSMA TWG**
Cc: **TSG GERAN, TSG CN WG1**

Contact Person:
    Name: **François Dronne, Orange**
    Tel. Number: +33 1 45 29 62 74
    E-mail Address: francois.dronne@francetelecom.com

Attachments: GP-030322

Overall description:

3GPP TSG CN#19 have discussed the problems described in the attached LS (GP-030322) initially sent by 3GPP TSG GERAN#13.

The problems identified by GERAN are all due to non-compliant implementation in pre-R99 network equipment. The consequences of these problems are critical service failures when using a compliant R99 UE in a non-compliant Pre-R99 network, and this could delay the market introduction of R99 UEs.

The outcome of the discussion in TSG CN #19 is the following:

1/ TSG CN concluded that the preferred solution would be to correct the network implementation. Therefore, TSG CN kindly asks GSMA to urge manufacturers to provide appropriate corrections and to urge GSM operators to deploy the corrections in their network.

2/ TSG CN kindly ask GSMA to provide 3GPP with an assessment of how long the problems that have been identified will persist, and the scale of these problems.

Additionally TSG CN would like to highlight to the GSMA that the deployment of a solution, which has not been technically analysed and endorsed by 3GPP may lead to unpredictable behaviour.

Action:
3GPP TSG CN kindly ask GSMA for guidance on the two questions above. Because of the critical nature of the identified problems, TSG CN would appreciate a quick response to this Liaison.

Dates of Next TSG-CN Meetings:

TSG CN Meeting #20	4th – 6th June 2003	Hämeenlinna, Finland
TSG CN Meeting #21	17th – 19th September 2003	Berlin, Germany