

**Source:** Telia AB, Motorola  
**Title:** CRs on equivalent handling of PLMNs with different PLMN codes  
**Document for:** Discussion  
**Agenda item:** ??? (WI R99 GSM-UMTS interworking, including PLMN selection)  
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## Background

In the new regulatory and commercial environment a number of cases have developed where there is a need for the mobile station to treat a group of PLMNs (i.e. PLMN codes as broadcast by the networks) in an equivalent way. Examples include

- two UMTS operators sharing the access infrastructure in parts of a country but with separate access infrastructures in other parts;
- two GSM operators sharing a common UMTS access infrastructure;
- one operator operating two networks with different PLMN codes (e.g. one GSM and one UMTS access infrastructure).

These issues were discussed at the TSG-SA workshop on UE in idle mode in Helsinki on 7-8 February 2001. A solution to these issues was also agreed. The solution is based on the principle of downloading a list of equivalent PLMNs to the UE. It was also agreed to have the CRs submitted and agreed as essential corrections to Release 99 (GSM-UMTS interworking). In the report of the Helsinki workshop is written:

*The discussion continued with the proposals for handling the problems related to case where more than one MCC+MNC has been allocated to networks which towards the user is to look as one network, e.g., the case with a common 3G network and two independent 2G, where the subscribers are belonging to either of the 2G network operators. It was concluded that the solution based on at location update to download a list of MCC+MNCs, which are to be considered the PLMN with respect to PLMN selection, cell (re-)selection etc., seemed to resolved the problems and provided more functionality than the solution with multiple MCC+MNCs for the HPLMN and also avoided some of the problems identified by 3GPP TSG CN WG1 for that case.*

The report also states:

*It was agreed to suggest the multiple MCC+MNC changes as for Release 99 as an essential correction for the work item GSM-UMTS interworking. This because some operators would request this feature implemented in all mobiles they purchase and the fact, that dual-mode operation does not work in the scenarios of two 2G operators sharing a 3G network, two 3G networks sharing a 2G network and the case of an operator which for regulatory reasons have been allocated different PLMN codes for the 2G and 3G access.*

Unfortunately it was not possible to prepare all CRs (Stage 1, Stage 2 and Stage 3) in time for the CN1#16 meeting. Only the Stage 3 CR to 24.008 R99 was discussed and commented. Due to the incomplete package and insufficient time, it was not possible to agree to that CR during the CN1 meeting.

As it is essential that the required changes are included in the R99 specifications (for an early implementation in the mobile stations), a complete package of Stage 1, Stage 2 and Stage 3 CRs was presented to TSG-CN#11 for a possible approval of the Stage 2 and Stage 3 CRs, on condition that the Stage 1 CRs are approved by TSG-SA#11 this week.

## Proposal

It is proposed that TSG-SA#11, as a special case, approve the related CRs to 3GPP TS 22.011 (R99 and REL-4). (The related CRs to 23.122 and 24.008 are under the responsibility of TSG-CN.)

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Related documents: SP-010016, CR-??? to 22.011 R99  
SP-010017, CR-??? to 22.011 REL-4  
SP-010018, CR-??? to 23.122 R99 (no REL-4 version of the TS exists)  
SP-010019, CR-??? to 24.008 R99  
SP-010020, CR-??? to 24.008 REL-4