

**Source:** Telia AB, Motorola, Vodafone  
**Title:** Equivalent handling of PLMNs with different PLMN codes  
**Agenda item:** 7.16 (GSM-UMTS interworking, including PLMN selection)  
**Document for:** Discussion  
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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.

## Proposal

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 has been prepared for this TSG-CN#11 meeting. It is proposed that TSG-CN#11, as a special case, approve the CRs to 23.122 (only the R99 version exists) and 24.008, provided that the principles outlined in the CRs to 22.011 are agreed by TSG-SA#11 next week.

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Related documents: NP-010178, CR-??? to 22.011 R99 (for information)  
NP-010179, CR-??? to 22.011 REL-4 (for information)  
NP-010180, CR-022r1 to 23.122 R99 (no REL-4 version of the TS exists)  
NP-010181, CR-368r1 to 24.008 R99  
NP-010182, CR-369r1 to 24.008 REL-4