Technical Specification Group Services and System Aspects
Meeting #12, Stockholm, Sweden, 18-21 June 2001

TSGS#12(01)0245

Source: **SA1**

Title: **CR to 22.129 Rel-4 on Inter PLMN handover**

Document for: **Approval**

Agenda Item: **7.1.3**

Spec	CR	Rev	Phase	Cat	Subject	Versio	Versio	Doc-2nd-
22.129	019		Rel-4	F	Inter PLMN handover	4.2.0	4.3.0	S1-010353

TSG-SA WG 1 (Services) meeting #12 TSG S1 (01) 0353
Helsinki, Finland, 7-11 May 2001 Agenda Item:

CR-Form-v3

CHANGE REQUEST

⌘ **22.129** **CR** **019** ⌘ rev ⌘ Current version: 4.2.0 ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Inter PLMN Handover
Source:	⌘	SA1
Work item code:	⌘	Handover
Date:	⌘	11.May 2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
- ***F*** *(essential correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(Addition of feature),*
- ***C*** *(Functional modification of feature)*
- ***D*** *(Editorial modification)*

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	There is no hard limitation for number of target PLMNs in handover. The limitations are related to problems in network planning (number of frequencies measured in active mode) and maintaince of information between operators. Thus the current limitaion of one terget PLMN in addition to used one is unnecessary.
Summary of change:	⌘	Last sentence of chapter 4.3.2. deleted.
Consequences if not approved:	⌘	Unnesessary limitation in specifications.

Clauses affected:	⌘	4.3.2
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

********** First Modified Sections **********

4.3.2 Inter PLMN Handover Issues

Handovers to support service continuity between PLMNs should remain an optional feature to implement. It is envisaged that handover would take place due to changing radio conditions caused e.g. by movement of the terminal causing it to leave the coverage area of a PLMN.
The following networks may be involved with an inter-PLMN handover procedure. These concepts are illustrated in Annex A:

- The user's *home network,* i.e. the operator where the user's subscription may be found;

- The user's *visited network* where the subscriber user is currently registered, i.e. the network where the subscriber user has performed the last successful update location procedure. As long as the subscriber user is roaming within the home network, home and visited network are identical;

- The user's *serving network* covering the cell that serves the subscriber. After successful completion of the update location update procedure, the serving network is identical with the visited network. After an inter-PLMN handover, the visited network is different from the serving network until a location update procedure has been successfully completed (excepted the case that the subscriber returns into the visited network);

- The *target network* covering candidate target cell(s) for inter-PLMN handover. The target network has overlapping radio coverage with the serving network but not necessarily with the visited network.

The minimum requirements for inter-PLMN HO are:

- Continuity of an *active call* across the handover procedure, where this would be possible for intra-PLMN handover;

- The decision whether the handover request is accepted must be taken by the target network;

~~There can only be one target PLMN for HO in addition to the serving PLMN in a given geographical area.~~