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**Source:** SA1  
**Title:** CRs to 22.011 on PLMN selection and background scan (Rel-6)  
**Document for:** Approval  
**Agenda Item:** 7.1.3

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Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-24	SP-040287	22.011	058	-	Rel-6	F	Behaviour of Single Mode mobiles with regards to the use of access technology in the PLMN selector lists	6.3.0	6.4.0	S1-040438
SP-24	SP-040287	22.011	059	-	Rel-6	F	Identification of FDD and TDD in the PLMN selector lists	6.3.0	6.4.0	S1-040440
SP-24	SP-040287	22.011	060	-	Rel-6	F	Use of access technology in Periodic Network Selection attempts	6.3.0	6.4.0	S1-040442
SP-24	SP-040287	22.011	061	-	Rel-6	F	Clarification on the use of the RAT during network selection	6.3.0	6.4.0	S1-040443
SP-24	SP-040287	22.011	065	-	Rel-6	F	Mobile behaviour when performing Periodic Network Selection attempts in un-coordinated networks	6.3.0	6.4.0	S1-040439

CR-Form-v7

## CHANGE REQUEST

⌘ **22.011 CR 058** ⌘ rev **-** ⌘ Current version: **6.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Behaviour of Single Mode mobiles with regards to the use of access technology in the PLMN selector lists				
<b>Source:</b>	⌘ SA1 (Motorola)				
<b>Work item code:</b>	⌘ TEI6	<b>Date:</b>	⌘ 21/04/2004		
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-6		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	<b>F</b> (correction)		2	(GSM Phase 2)	
	<b>A</b> (corresponds to a correction in an earlier release)		R96	(Release 1996)	
	<b>B</b> (addition of feature),		R97	(Release 1997)	
	<b>C</b> (functional modification of feature)		R98	(Release 1998)	
	<b>D</b> (editorial modification)		R99	(Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Rel-4	(Release 4)	
			Rel-5	(Release 5)	
			Rel-6	(Release 6)	

<b>Reason for change:</b>	⌘ For a GSM only mobile it would seem that the PLMN list to be used should only consist of those PLMNs which are on the GSM frequency. Assuming the following PLMN selector list on the USIM: PLMN A UMTS PLMN B UMTS PLMN B GSM PLMN A GSM  In the above example it is assume that a GSM only mobile should use the priority: PLMN B PLMN A  This needs to be clearly specified in TS 22.011
<b>Summary of change:</b>	⌘ Text is added to specify that a single mode mobile shall ignore those PLMN + access technology entries on the PLMN selector list where the associated RAT is not supported by the ME.
<b>Consequences if not approved:</b>	⌘ There will be no clear requirement for how a single mode mobile should use the PLMN selector lists

<b>Clauses affected:</b>	⌘ 3.2.2.1		
<table border="1" style="margin: auto;"> <tr> <td style="padding: 2px 10px;">Y</td> <td style="padding: 2px 10px;">N</td> </tr> </table>		Y	N
Y	N		

<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	TS 23.122
		<input checked="" type="checkbox"/>	Test specifications		
		<input checked="" type="checkbox"/>	O&M Specifications		
<b>Other comments:</b>	⌘				

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 3.2.2 Procedures

### 3.2.2.1 General

In the following procedures the UE selects and attempts registration on PLMNs.

In this TS, the term "PLMN Selection" defines an UE based procedure, whereby candidate PLMNs are chosen, one at a time, for attempted registration.

A User Controlled PLMN Selector data field exists on the USIM to allow the user to indicate a preference for network selection. It shall be possible for the user to update the User Controlled PLMN Selector data field, but it shall not be possible to update this data field over the radio interface, e.g. using SIM Application Toolkit.

It shall be possible to have an Operator Controlled PLMN Selector list and a User Controlled PLMN Selector list stored on the SIM/USIM card. Both PLMN Selector lists may contain a list of preferred PLMNs in priority order. It shall be possible to have an associated Access Technology identifier e.g., UTRAN, or GERAN associated with each entry in the PLMN Selector lists.

NOTE 1: A PLMN in a Selector list, including HPLMN, may have multiple occurrences, with different access technology identifiers.

The UE shall ignore those PLMN + access technology entries in the User Controlled PLMN selector and Operator Controlled PLMN selector lists where the associated Access Technology is not supported by the UE. In the case that there are multiple associated Access Technology identifiers in an entry the UE shall not ignore the entry if it includes any associated Access Technology that is supported by the UE.

It shall be possible to handle cases where one network operator accepts access from access networks with different network IDs. It shall also be possible to indicate to the UE that a group of PLMNs are equivalent to the registered PLMN regarding PLMN selection, cell selection/re-selection and handover.

If registration on a PLMN is successful, the UE shall indicate this PLMN (the "registered PLMN") and be capable of making and receiving calls on it. The identity of the registered PLMN shall be stored on the SIM/USIM. However, if registration is unsuccessful, the UE shall ensure that there is no registered PLMN stored in the SIM/USIM.

If a registration is unsuccessful because the IMSI is unknown in the home network, or the UE is illegal, then the UE shall not allow any further registration attempts on any network, until the UE is next powered-up or a SIM/USIM is inserted.

If the registration is unsuccessful due to the lack to service entitlement, specific behaviour by the UE may be required, see subclause 3.2.2.4.

To avoid unnecessary registration attempts, lists of forbidden PLMNs and LAs are maintained in the UE, see subclause 3.2.2.4 and 3GPP TS 23.122 [3].

Registration attempts shall not be made by UEs without a SIM/USIM inserted.

An UE/ME which has not successfully registered shall nevertheless be able to make emergency call attempts on an available PLMN(which supports the emergency call teleservice), without the need for the user to select a PLMN. An available PLMN is determined by radio characteristics (3GPP TS 23.122 [3]).

CR-Form-v7

## CHANGE REQUEST

⌘ **22.011 CR 059** ⌘ rev **-** ⌘ Current version: **6.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Identification of FDD and TDD in the PLMN selector lists		
<b>Source:</b>	⌘ SA1 (Motorola)		
<b>Work item code:</b>	⌘ TEI6	<b>Date:</b>	⌘ 21/04/2004
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		<b>2</b> (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		<b>R96</b> (Release 1996)
	<b>B</b> (addition of feature),		<b>R97</b> (Release 1997)
	<b>C</b> (functional modification of feature)		<b>R98</b> (Release 1998)
	<b>D</b> (editorial modification)		<b>R99</b> (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<b>Rel-4</b> (Release 4)
			<b>Rel-5</b> (Release 5)
			<b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Currently there is no way to identify between the different access technologies supported by UTRAN (i.e. no identifiers for FDD or TDD (high and low))
	As it has been specified that the access technology type is to be used in the periodic network selection attempts the RAT should be identified not just as UTRAN but rather as FDD, TDD high rate and TDD low rate.
	If this is not done then once TDD networks are launched there will be no way of selecting the associated access technology.
<b>Summary of change:</b>	⌘ Text is added to specify that it shall be possible to select a PLMN based on the different UMTS access technologies.
<b>Consequences if not approved:</b>	⌘ There will be no requirement for supporting the TDD access technology

<b>Clauses affected:</b>	⌘ 3.2.2.1										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ TS 23.122, TS 31.102, TS 31.111
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									
<b>Other comments:</b>	⌘										

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## 3.2.2 Procedures

### 3.2.2.1 General

In the following procedures the UE selects and attempts registration on PLMNs.

In this TS, the term "PLMN Selection" defines an UE based procedure, whereby candidate PLMNs are chosen, one at a time, for attempted registration.

A User Controlled PLMN Selector data field exists on the USIM to allow the user to indicate a preference for network selection. It shall be possible for the user to update the User Controlled PLMN Selector data field, but it shall not be possible to update this data field over the radio interface, e.g. using SIM Application Toolkit.

It shall be possible to have an Operator Controlled PLMN Selector list and a User Controlled PLMN Selector list stored on the SIM/USIM card. Both PLMN Selector lists may contain a list of preferred PLMNs in priority order. It shall be possible to have an associated Access Technology identifier e.g., [UTRAN-FDD](#), [TDD high rate](#), [TDD low rate](#), or GERAN associated with each entry in the PLMN Selector lists.

**NOTE 1:** A PLMN in a Selector list, including HPLMN, may have multiple occurrences, with different access technology identifiers.

It shall be possible to handle cases where one network operator accepts access from access networks with different network IDs. It shall also be possible to indicate to the UE that a group of PLMNs are equivalent to the registered PLMN regarding PLMN selection, cell selection/re-selection and handover.

If registration on a PLMN is successful, the UE shall indicate this PLMN (the "registered PLMN") and be capable of making and receiving calls on it. The identity of the registered PLMN shall be stored on the SIM/USIM. However, if registration is unsuccessful, the UE shall ensure that there is no registered PLMN stored in the SIM/USIM.

If a registration is unsuccessful because the IMSI is unknown in the home network, or the UE is illegal, then the UE shall not allow any further registration attempts on any network, until the UE is next powered-up or a SIM/USIM is inserted.

If the registration is unsuccessful due to the lack to service entitlement, specific behaviour by the UE may be required, see subclause 3.2.2.4.

To avoid unnecessary registration attempts, lists of forbidden PLMNs and LAs are maintained in the UE, see subclause 3.2.2.4 and 3GPP TS 23.122 [3].

Registration attempts shall not be made by UEs without a SIM/USIM inserted.

An UE/ME which has not successfully registered shall nevertheless be able to make emergency call attempts on an available PLMN(which supports the emergency call teleservice), without the need for the user to select a PLMN. An available PLMN is determined by radio characteristics (3GPP TS 23.122 [3]).

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## CHANGE REQUEST

⌘ **22.011 CR 060** ⌘ rev **-** ⌘ Current version: **6.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Use of access technology in Periodic Network Selection attempts ⌘		
<b>Source:</b>	⌘ SA1 (Motorola) ⌘		
<b>Work item code:</b>	⌘ TEI6 ⌘	<b>Date:</b>	⌘ 21/04/2004 ⌘
<b>Category:</b>	⌘ <b>F</b> ⌘	<b>Release:</b>	⌘ Rel-6 ⌘
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Following the discussion on the use of Radio Access Technology (RAT) by the UE in PLMN selection, and in particular background scan, it has been agreed that the RAT is to be used.  This needs to be clearly specified in TS 22.011
<b>Summary of change:</b>	⌘ The wording in the relevant section of TS 22.011 is amended to clearly specify that the periodic network selection attempts using a PLMN + RAT combination
<b>Consequences if not approved:</b>	⌘ There will be no clear requirement for the use of RAT in the periodic network selection attempts

<b>Clauses affected:</b>	⌘ 3.2.2.5 ⌘										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X	⌘ TS 23.122 ⌘	
Y	N										
X											
	X										
	X										
<b>Other comments:</b>	⌘										

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### 3.2.2.5 Periodic network selection attempts

A UE in Automatic Mode shall make periodic attempts to look for a higher priority PLMN [including associated Access Technology](#) of the same country as the currently received PLMN [including associated Access Technology](#). For the ranking of PLMNs the UE shall use the order used in subclause 3.2.2.2. [In the case that there is no associated Access Technology identifier the mobile shall assume that all Access Technologies provided by a PLMN are of equal priority.](#) Moreover, periodic network selection shall not lead to change of access technology within the registered PLMN.

In the case that the UE has stored a list of equivalent PLMNs, the UE shall only select a PLMN if it has a higher priority than all the PLMNs, in the list of equivalent PLMNs, which are of the same country as the currently registered PLMN.

NOTE: In the context of this 3GPP TS, the term country is to be interpreted not as a political entity but as a single Mobile Country Code (MCC). For instance the USA has multiple MCC. The USA case is in fact treated as an exception in the 3GPP specifications. For all other countries, multiple MCCs may be used, however the specifications have not taken this into account and there could be adverse effects such as the UE being unable to detect that multiple MCCs are within the same country.

The UE shall only make reselection attempts while in idle mode for circuit services.

The interval between attempts shall be stored in the SIM/USIM. Only the service provider shall be able to select for which of the previous situations, periodic network selection shall be attempted and to set the interval, which shall be between 6 minutes and 8 hours, with a step size of 6 minutes. One value shall be designated to indicate that no periodic attempts shall be made.

In the absence of a permitted value in the SIM/USIM, or the SIM/USIM is phase 1 and therefore does not contain the datafield, then a default value of 60 minutes, shall be used by the UE.

NOTE: Use of values less than 60 minutes may result in excessive ME battery drain.

CR-Form-v7

## CHANGE REQUEST

⌘ **22.011 CR 061** ⌘ rev - ⌘ Current version: **6.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Clarification on the use of the RAT during network selection		
<b>Source:</b>	⌘ SA1 (Ericsson, Orange)		
<b>Work item code:</b>	⌘ TEI6	<b>Date:</b>	⌘ 04/05/2004
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-6
	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ The relevance of the RAT during background scan (periodic network selection) has been discussed in 3GPP and at the TSG-CN#23 meeting it was agreed, as a TSG-CN working assumption, that RAT shall be taken into account in the background scan. This CR aims at clarifying related text that has been experienced as a bit ambiguous.
<b>Summary of change:</b>	⌘ It is clarified that the requirement in 'Automatic network selection mode', steps ii and iii, is to select and attempt registration on PLMN/access technology combinations found in each <i>entry</i> in the "User Controlled PLMN Selector with Access Technology" data field and the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM/USIM, in priority order.  In addition the terminology used in the text regarding the "User Controlled PLMN Selector with Access Technology" and the "Operator Controlled PLMN Selector with Access Technology" data fields in the SIM/USIM is amended to be in line with the terminology used in 3GPP TS 51.011 and 3GPP TS 31.102 where these data fields are defined.
<b>Consequences if not approved:</b>	⌘ The principles for automatic network selection in general and background scan in particular remains a bit ambiguous regarding the priority order of PLMN/access technology combinations.

<b>Clauses affected:</b>	⌘ 3.2.2.2		
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> </table>	Y	N
Y	N		

<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	23.122 CR 069
		<input checked="" type="checkbox"/>	Test specifications		
		<input checked="" type="checkbox"/>	O&M Specifications		
<b>Other comments:</b>	⌘				

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### 3.2.2.2 At switch-on or recovery from lack of coverage

If the UE is within coverage (at switch-on) or returns to coverage of the PLMN on which it is already registered (as indicated by the registered PLMN stored in the SIM/USIM), the UE shall perform a location update to a new location area if necessary.

If there is no registered PLMN stored in the SIM/USIM, or if this PLMN is unavailable and no equivalent PLMN is available, or the attempted registration fails, the UE shall follow one of the following procedures for network selection:

#### A) Automatic network selection mode

The UE shall select and attempt registration on other PLMNs, if available and allowable and the location area is not in the list of "forbidden LAs for roaming" (see 3GPP TS 23.122 [3]), in the following order:

- i) HPLMN for preferred access technologies in the order specified. It shall be possible to configure a voice capable UE so that it shall not attempt registration on a PLMN if all cells identified as belonging to the PLMN do not support the corresponding voice service;
- ii) each **PLMNentry** in the "-User Controlled PLMN Selector with Access Technology" data field in the SIM/USIM (in priority order)-. It shall be possible to configure a voice capable UE so that it shall not attempt registration on a PLMN if all cells identified as belonging to the PLMN do not support the corresponding voice service;
- iii) each **PLMNentry** in the "Operator Controlled PLMN Selector with Access Technology" data field in the SIM/USIM (in priority order). It shall be possible to configure a voice capable UE so that it shall not attempt registration on a PLMN if all cells identified as belonging to the PLMN do not support the corresponding voice service;
- iv) other PLMN/access technology combinations with sufficient received signal quality (see 3GPP TS 23.122 [3]) in random order. It shall be possible to configure a voice capable UE so that it shall not attempt registration on a PLMN if all cells identified as belonging to the PLMN do not support the corresponding voice service;
- v) all other PLMN/access technology combinations in order of decreasing signal quality. It shall be possible to configure a voice capable UE so that it shall not attempt registration on a PLMN if all cells identified as belonging to the PLMN do not support the corresponding voice service.

In the case of a UE operating in UE operation mode A or B, an allowable PLMN is one which is not in the "Forbidden PLMN" data field in the SIM/USIM . This data field may be extended in the ME memory.(see subclause 3.2.2.4). In the case of a UE operating in UE operation mode C, an allowable PLMN is one which is not in the "Forbidden PLMN" data field in the SIM/USIM or in the list of "forbidden PLMNs for GPRS service" in the ME.

If successful registration is achieved, the UE shall indicate the selected PLMN.

If registration cannot be achieved on any PLMN, the UE shall indicate "no service" to the user, wait until a new PLMN is detected, or new location areas of an allowed PLMN are found which are not in the forbidden LA list(s), and then repeat the procedure. When registration cannot be achieved, different (discontinuous) PLMN search schemes may be used in order to minimize the access time while maintaining battery life, e.g. by prioritising the search in favour of BCCH carriers which have a high probability of belonging to an available and allowable PLMN.

<\*\*\*\*\* end of change \*\*\*\*\*>

CR-Form-v7

## CHANGE REQUEST

⌘ **22.011 CR 065** ⌘ rev **-** ⌘ Current version: **6.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Mobile behaviour when performing Periodic Network Selection attempts in un-coordinated networks				
<b>Source:</b>	⌘ SA1 (Motorola)				
<b>Work item code:</b>	⌘ TEI6	<b>Date:</b>	⌘ 21/04/2004		
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-6		
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			Rel-5	(Release 5)	
			Rel-6	(Release 6)	

<b>Reason for change:</b>	⌘ The use of RAT was foreseen to potentially cause a UE to 'jump' between RATs of the same PLMN and a CR to TS 22.011 was agreed at the last SA meeting which inhibits this so called ping pong between the different RATs of a single PLMN.
	However, the introduction of the requirement that the presence of one RAT causes the mobile to stay on another RAT of the same PLMN will impact those operators who are effectively running independent networks (i.e. same PLMN code but no cell re-selection between the different RATs) and will prevent the behaviour that they might expect when the RAT is to be used as part of the periodic network selection attempt. In particular it is possible that in such an environment a 3G subscriber could end up 'sticking' on the 2G RAT even though 3G (and the corresponding services) is available.
	The current stage 1 requirement not to change in background scan between the different RATs of the same PLMN inhibit the possibility to guide the user back from nationwide GSM coverage to (patchy) UMTS coverage if the UMTS coverage has been lost momentarily.
<b>Summary of change:</b>	⌘ Wording is added to TS 22.011 to allow for a mobile to move between RATs in the case that the network is un-coordinated.
<b>Consequences if not approved:</b>	⌘ Operators will not be able to guide their subscribers to the correct access technology and Users will not be able to access the services that they expect to be able to use.

<b>Clauses affected:</b>	⌘	3.2.2.5										
<b>Other specs affected:</b>	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr></table>	Y	N	X			X		X	Other core specifications	⌘ TS 23.122
		Y	N									
		X										
	X											
	X											
	Test specifications											
	O&M Specifications											
<b>Other comments:</b>	⌘	The above mentioned problem of a network in areas effectively running independent networks has been experienced in Asia										

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 3.2.2.5 Periodic network selection attempts

A UE in Automatic Mode shall make periodic attempts to look for a higher priority PLMN of the same country as the currently received PLMN. For the ranking of PLMNs the UE shall use the order used in subclause 3.2.2.2. Moreover, [if a network indicates \(see 3GPP TS 23.122 \[31\]\) it is using cell reselection to move UEs between Access Technologies supported by the PLMN](#), periodic network selection shall not lead to a change of access technology within the registered PLMN.

In the case that the UE has stored a list of equivalent PLMNs, the UE shall only select a PLMN if it has a higher priority than all the PLMNs, in the list of equivalent PLMNs, which are of the same country as the currently registered PLMN.

**NOTE:** In the context of this 3GPP TS, the term country is to be interpreted not as a political entity but as a single Mobile Country Code (MCC). For instance the USA has multiple MCC. The USA case is in fact treated as an exception in the 3GPP specifications. For all other countries, multiple MCCs may be used, however the specifications have not taken this into account and there could be adverse effects such as the UE being unable to detect that multiple MCCs are within the same country.

The UE shall only make reselection attempts while in idle mode for circuit services.

The interval between attempts shall be stored in the SIM/USIM. Only the service provider shall be able to select for which of the previous situations, periodic network selection shall be attempted and to set the interval, which shall be between 6 minutes and 8 hours, with a step size of 6 minutes. One value shall be designated to indicate that no periodic attempts shall be made.

In the absence of a permitted value in the SIM/USIM, or the SIM/USIM is phase 1 and therefore does not contain the datafield, then a default value of 60 minutes, shall be used by the UE.

**NOTE:** Use of values less than 60 minutes may result in excessive ME battery drain.