

Source: SA1

**Title: CRs to 22.101 on Alignment to TS 31.102 on FDN/BDN
unsupported terminal procedure (R99, Rel-4, Rel-5, Rel-6)**

Document for: Approval

Agenda Item: 7.1.3

Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-23	SP-040084	22.101	142	-	R99	F	Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.	3.16.0	3.17.0	S1-040195
SP-23	SP-040084	22.101	143	-	Rel-4	A	Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.	4.9.0	4.10.0	S1-040196
SP-23	SP-040084	22.101	144	-	Rel-5	A	Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.	5.12.0	5.13.0	S1-040197
SP-23	SP-040084	22.101	145	-	Rel-6	A	Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.	6.6.0	6.7.0	S1-040198

CHANGE REQUEST

22.101 CR 142 # rev **-** # Current version: **3.16.0**

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

Title:	# Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.		
Source:	# SA1 (NTT DoCoMo Inc.)		
Work item code:	# TEI	Date:	# 13/1/2004
Category:	# F	Release:	# R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# Inconsistent description between TS 22.101 and TS 31.102. In the case when FDN/BDN is enabled, FDN/BDN unsupported terminals shall not allow the receiving of calls in SA1 specifications, however they are permitted from T3 point of view. This inconsistency was introduced by the difference between GSM and UMTS service features. In GSM, FDN/BDN unsupported terminals do not make nor receive calls because IMSI is invalidated in the SIM. In UMTS, T3 introduced the new feature to enable/disable FDN/BDN feature at EF_EST in the USIM from the beginning of R99, therefore receiving calls are still allowed for FDN/BDN unsupported terminals in case FDN/BDN is enabled in the USIM. When creating UMTS specifications, this description in the TS 22.101 was not updated, so alignment is needed. In addition, the behaviour in the TS 31.102 also conforms to the current handset manufacturer's implementations.
Summary of change:	# Clarification of the text to state that FDN/BDN unsupported terminals shall allow the receiving of calls in case FDN/BDN is enabled in the USIM. It is still not possible to receive calls when FDN/BDN is enabled in the SIM. Therefore, the text is changed to so that the functionalities for the USIM and SIM cases are specified separately.
Consequences if not approved:	# Interoperability problems due to the misalignment of TS 22.101 with TS 31.102. Implementation based on TS 22.101 would result in implementations of FDN/BDN within terminals that will not allow calls to be received when FDN/BDN service is enabled in the USIM. However, implementation based on TS 31.102 would allow calls to be received in this case.

Furthermore, the inability to receive calls if implementation is based on TS 22.101 would result in unnecessary call failure and subsequent loss of revenue for the operator.

Clauses affected:	⌘	Annex A.19, A.24									
Other specs affected:		<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</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 ⌘
	Y	N									
		X									
	X										
	X										
		Test specifications									
		O&M Specifications									
Other comments:	⌘										

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.

Annex A (normative): Description of optional user equipment features

[...]

A.19 Barring of Dialed Numbers

This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers belonging to a pre-programmed list of numbers in the SIM/USIM.

Barred Dialling Numbers stored in the /USIM may contain wild characters.

Under control of PIN2, "Barred Dialling Mode" may be enabled or disabled. The selected mode is stored in the SIM/USIM.

Under PIN2 control, it shall be possible to add, modify or delete a particular "Barred Dialling Number" (BDN) and to allocate or modify its associated comparison method(s). This BDN may have the function of an abbreviated dialling number / supplementary service control (ADN/SSC), overflow and/or sub-address.

When BDN is inactive, no special controls are specified, and the barred dialling numbers may be read (though not modified or deleted, except under PIN2 control) as if they were normal abbreviated dialling numbers. Access to keyboard and normal abbreviated dialling numbers (including sub-address) is also permitted.

When Barring of Dialed Numbers is active:

- Considering a number dialed by the user, if it exists a BDN for which there is a successful comparison (see below) between that BDN and the dialed number, then the ME shall prevent the call attempt to that number. If there is no BDN to fulfil those conditions, the call attempt is allowed by the ME.

With each BDN is associated one (or a combination of) comparison method(s) used between that BDN and the number dialed by the user. At least three different comparison methods are possible:

- The comparison is made from the first digit of that BDN, from the first digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- The comparison is made from the first digit of that BDN, from any digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- The comparison is made backwards from the last digit of that BDN, from the last digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- If a BDN stored in the SIM/USIM contains one or more wild characters in any position, each wild character shall be replaced by any single digit when the comparison between that BDN and the dialed number is performed.
- If a BDN contains a sub-address, and the same number without any sub-address or with that sub-address is dialed, the ME shall prevent the call attempt to that number.
- Numbers specified as "barred" may only be modified under PIN2 control.
- If the ME does not support barring of dialed numbers, the UE [with a BDN enabled USIM](#) shall not allow the making ~~of or receiving~~ calls [and the UE with a BDN enabled SIM shall not allow the making or receiving of calls](#). However, this feature does not affect the ability to make emergency calls.

If "Fixed Number Dialling" and "Barring of Dialed Numbers" are simultaneously active, the dialed number shall be checked against the two features before the ME allows the call attempt. In that case, a dialed number will only be allowed by the ME if it is in the FDN list and if the comparison between that number and any number from the BDN list is not successful.

The UE may support other selective barrings, e.g. applying to individual services (e.g. telephony, data transmission) or individual call types (e.g. long distance, international calls).

[...]

A.24 Fixed number dialling

This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers other than those pre-programmed in the SIM/USIM.

Under control of PIN 2, "Fixed Dialling Mode" may be enabled or disabled. The mode selected is stored in the SIM/USIM.

Fixed Dialling Numbers (FDNs) are stored in the SIM/USIM in the Fixed Dialling Number field. FDN entries are composed of a destination address/Supplementary Service Control. Destination addresses may have the format relevant to the bearer services/teleservices defined in [21] and [14]. FDN entries may take the function of an Abbreviated Dialling Number/Supplementary Service Control (ADN/SSC), Overflow and/or sub-address. Fixed Dialling Numbers stored in the SIM/USIM may contain wild card characters.

The Fixed Dialling feature is optional, however when Fixed Dialling Mode is enabled, an ME supporting the feature shall;

- Prevent the establishment of bearer services/teleservices to destination addresses which are not in FDN entries on a per bearer service/teleservice basis. The list of bearer services/teleservices excluded from the FDN check shall be stored in the SIM/USIM. Those bearer services/teleservices are characterized by their service code as described in [23]. For instance if the SMS teleservices is indicated in this list, SMS can be sent to any destination. By default, the ME shall prevent the establishment of any bearer service/teleservice to destination addresses which are not in FDN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow the establishment of bearer services/teleservice to destination addresses stored in FDN entries. For SMS, the Service Center address and the end-destination address shall be checked.
- Support the reading and substitution of wildcards in any position of an FDN entry, via the ME MMI.
- Allow the user to replace each wildcard of an FDN entry by a single digit, on a per call basis without using PIN2. The digit replacing the wildcard may be used for network access or supplementary service operation.
- Only allow Supplementary Service (SS) Control (in Dedicated or Idle mode) if the SS control string is stored as an FDN entry.
- Allow the extension of an FDN entry by adding digits to the Fixed Dialling number on a per call basis.
- Allow the emergency numbers (see Section 8.4) to be called, even if it is not an FDN entry.
- Allow normal access to ADN fields (i.e. allow ADN entries to be modified, added or deleted) and the keyboard.
- Allow use of ADNs subject to the FDN filter.

When FDN is disabled, an ME supporting FDN shall;

- Allow FDN entries to be read as though they were normal ADN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow normal access to ADN fields and the keyboard.

If the ME does not support FDN, the UE shall not allow the making ~~or receiving~~ of calls when Fixed Dialling is enabled [in the USIM, and the UE shall not allow the making or receiving of calls when Fixed Dialling is enabled in the SIM.](#)

However, emergency calls (112 and other user defined emergency numbers) shall still be possible.

NOTE: Wildcards are stored on the SIM/USIM. The wildcard coding is given in TS 31.102 [19].

CHANGE REQUEST

22.101 CR 143 # rev **-** # Current version: **4.9.0**

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

Title:	# Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.		
Source:	# SA1 (NTT DoCoMo Inc,)		
Work item code:	# TEI	Date:	# 13/1/2004
Category:	# A	Release:	# Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# Inconsistent description between TS 22.101 and TS 31.102. In the case when FDN/BDN is enabled, FDN/BDN unsupported terminals shall not allow the receiving of calls in SA1 specifications, however they are permitted from T3 point of view. This inconsistency was introduced by the difference between GSM and UMTS service features. In GSM, FDN/BDN unsupported terminals do not make nor receive calls because IMSI is invalidated in the SIM. In UMTS, T3 introduced the new feature to enable/disable FDN/BDN feature at EF_EST in the USIM from the beginning of R99, therefore receiving calls are still allowed for FDN/BDN unsupported terminals in case FDN/BDN is enabled in the USIM. When creating UMTS specifications, this description in the TS 22.101 was not updated, so alignment is needed. In addition, the behaviour in the TS 31.102 also conforms to the current handset manufacturer's implementations.
Summary of change:	# Clarification of the text to state that FDN/BDN unsupported terminals shall allow the receiving of calls in case FDN/BDN is enabled in the USIM. It is still not possible to receive calls when FDN/BDN is enabled in the SIM. Therefore, the text is changed to so that the functionalities for the USIM and SIM cases are specified separately.
Consequences if not approved:	# Interoperability problems due to the misalignment of TS 22.101 with TS 31.102. Implementation based on TS 22.101 would result in implementations of FDN/BDN within terminals that will not allow calls to be received when FDN/BDN service is enabled in the USIM. However, implementation based on TS 31.102 would allow calls to be received in this case.

Furthermore, the inability to receive calls if implementation is based on TS 22.101 would result in unnecessary call failure and subsequent loss of revenue for the operator.

Clauses affected:	⌘	Annex A.20, A.25										
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Annex A (normative): Description of optional user equipment features

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Barred Dialling Numbers stored in the /USIM may contain wild characters.

Under control of PIN2, “Barred Dialling Mode” may be enabled or disabled. The selected mode is stored in the SIM/USIM.

Under PIN2 control, it shall be possible to add, modify or delete a particular “Barred Dialling Number” (BDN) and to allocate or modify its associated comparison method(s). This BDN may have the function of an abbreviated dialling number / supplementary service control (AND/SSC), overflow and/or sub-address.

When BDN is inactive, no special controls are specified, and the barred dialling numbers may be read (though not modified or deleted, except under PIN2 control) as if they were normal abbreviated dialling numbers. Access to keyboard and normal abbreviated dialling numbers (including sub-address) is also permitted.

When Barring of Dialed Numbers is active:

- Considering a number dialed by the user, if it exists a BDN for which there is a successful comparison (see below) between that BDN and the dialed number, then the ME shall prevent the call attempt to that number. If there is no BDN to fulfil those conditions, the call attempt is allowed by the ME.

With each BDN is associated one (or a combination of) comparison method(s) used between that BDN and the number dialed by the user. At least three different comparison methods are possible:

- The comparison is made from the first digit of that BDN, from the first digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- The comparison is made from the first digit of that BDN, from any digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- The comparison is made backwards from the last digit of that BDN, from the last digit of the dialed number and for a number of digits corresponding to the length of the BDN.
- If a BDN stored in the SIM/USIM contains one or more wild characters in any position, each wild character shall be replaced by any single digit when the comparison between that BDN and the dialed number is performed.
- If a BDN contains a sub-address, and the same number without any sub-address or with that sub-address is dialed, the ME shall prevent the call attempt to that number.
- Numbers specified as “barred” may only be modified under PIN2 control.
- If the ME does not support barring of dialed numbers, the UE [with a BDN enabled USIM](#) shall not allow the making ~~of or receiving~~ calls [and the UE with BDN enabled SIM shall not allow the making or receiving of calls](#). However, this feature does not affect the ability to make emergency calls.

If “Fixed Number Dialling” and “Barring of Dialed Numbers” are simultaneously active, the dialed number shall be checked against the two features before the ME allows the call attempt. In that case, a dialed number will only be allowed by the ME if it is in the FDN list and if the comparison between that number and any number from the BDN list is not successful.

The UE may support other selective barrings, e.g. applying to individual services (e.g. telephony, data transmission) or individual call types (e.g. long distance, international calls).

[...]

A.25 Fixed number dialling

This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers other than those pre-programmed in the SIM/USIM.

Under control of PIN 2, “Fixed Dialling Mode” may be enabled or disabled. The mode selected is stored in the SIM/USIM.

Fixed Dialling Numbers (FDNs) are stored in the SIM/USIM in the Fixed Dialling Number field. FDN entries are composed of a destination address/Supplementary Service Control. Destination addresses may have the format relevant to the bearer services/teleservices defined in [21] and [14]. FDN entries may take the function of an Abbreviated Dialling Number/Supplementary Service Control (AND/SSC), Overflow and/or sub-address. Fixed Dialling Numbers stored in the SIM/USIM may contain wild card characters.

The Fixed Dialling feature is optional, however when Fixed Dialling Mode is enabled, an ME supporting the feature shall;

- Prevent the establishment of bearer services/teleservices to destination addresses which are not in FDN entries on a per bearer service/teleservice basis. The list of bearer services/teleservices excluded from the FDN check shall be stored in the SIM/USIM. Those bearer services/teleservices are characterised by their service code as described in [23]. For instance if the SMS teleservices is indicated in this list, SMS can be sent to any destination. By default, the ME shall prevent the establishment of any bearer service/teleservice to destination addresses which are not in FDN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow the establishment of bearer services/teleservice to destination addresses stored in FDN entries. For SMS, the Service Center address and the end-destination address shall be checked.
- Support the reading and substitution of wildcards in any position of an FDN entry, via the ME MMI.
- Allow the user to replace each wildcard of an FDN entry by a single digit, on a per call basis without using PIN2. The digit replacing the wildcard may be used for network access or supplementary service operation.
- Only allow Supplementary Service (SS) Control (in Dedicated or Idle mode) if the SS control string is stored as an FDN entry.
- Allow the extension of an FDN entry by adding digits to the Fixed Dialling number on a per call basis.
- Allow the emergency numbers (see Section 8.4) to be called, even if it is not an FDN entry.
- Allow normal access to AND fields (i.e. allow AND entries to be modified, added or deleted) and the keyboard.
- Allow use of ADNs subject to the FDN filter.

When FDN is disabled, an ME supporting FDN shall;

- Allow FDN entries to be read as though they were normal AND entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow normal access to AND fields and the keyboard.

If the ME does not support FDN, the UE shall not allow the making ~~or receiving~~ of calls when Fixed Dialling is enabled [in the USIM, and the UE shall not allow the making or receiving of calls when Fixed Dialling is enabled in the SIM.](#)

However, emergency calls (112 and other user defined emergency numbers) shall still be possible.

NOTE: Wildcards are stored on the SIM/USIM. The wildcard coding is given in 3GPP TS 31.102 [19].

CHANGE REQUEST

22.101 CR 144 # rev **-** # Current version: **5.12.0**

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

Title:	# Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.		
Source:	# SA1 (NTT DoCoMo Inc.)		
Work item code:	# TEI	Date:	# 13/1/2004
Category:	# A	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
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- Considering a number dialled by the user, if it exists a BDN for which there is a successful comparison (see below) between that BDN and the dialled number, then the ME shall prevent the call attempt to that number. If there is no BDN to fulfil those conditions, the call attempt is allowed by the ME.

With each BDN is associated one (or a combination of) comparison method(s) used between that BDN and the number dialled by the user. At least three different comparison methods are possible:

- The comparison is made from the first digit of that BDN, from the first digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- The comparison is made from the first digit of that BDN, from any digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- The comparison is made backwards from the last digit of that BDN, from the last digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- If a BDN stored in the SIM/USIM contains one or more wild characters in any position, each wild character shall be replaced by any single digit when the comparison between that BDN and the dialled number is performed.
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- Numbers specified as "barred" may only be modified under PIN2 control.
- If the ME does not support barring of dialled numbers, the UE [with a BDN enabled USIM](#) shall not allow the making ~~of or receiving~~ calls [and the UE with BDN enabled SIM shall not allow the making or receiving of calls](#). However, this feature does not affect the ability to make emergency calls.

If "Fixed Number Dialling" and "Barring of Dialed Numbers" are simultaneously active, the dialled number shall be checked against the two features before the ME allows the call attempt. In that case, a dialled number will only be allowed by the ME if it is in the FDN list and if the comparison between that number and any number from the BDN list is not successful.

The UE may support other selective barrings, e.g. applying to individual services (e.g. telephony, data transmission) or individual call types (e.g. long distance, international calls).

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This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers other than those pre-programmed in the SIM/USIM.

Under control of PIN 2, "Fixed Dialling Mode" may be enabled or disabled. The mode selected is stored in the SIM/USIM.

Fixed Dialling Numbers (FDNs) are stored in the SIM/USIM in the Fixed Dialling Number field. FDN entries are composed of a destination address/Supplementary Service Control. Destination addresses may have the format relevant to the bearer services/teleservices defined in [21] and [14]. FDN entries may take the function of an Abbreviated Dialling Number/Supplementary Service Control (ADN/SSC), Overflow and/or sub-address. Fixed Dialling Numbers stored in the SIM/USIM may contain wild card characters.

The Fixed Dialling feature is optional, however when Fixed Dialling Mode is enabled, an ME supporting the feature shall;

- Prevent the establishment of bearer services/teleservices to destination addresses which are not in FDN entries on a per bearer service/teleservice basis. The list of bearer services/teleservices excluded from the FDN check shall be stored in the SIM/USIM. Those bearer services/teleservices are characterised by their service code as described in [23]. For instance if the SMS teleservices is indicated in this list, SMS can be sent to any destination. By default, the ME shall prevent the establishment of any bearer service/teleservice to destination addresses which are not in FDN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow the establishment of bearer services/teleservice to destination addresses stored in FDN entries. For SMS, the Service Center address and the end-destination address shall be checked.
- Support the reading and substitution of wildcards in any position of an FDN entry, via the ME MMI.
- Allow the user to replace each wildcard of an FDN entry by a single digit, on a per call basis without using PIN2. The digit replacing the wildcard may be used for network access or supplementary service operation.
- Only allow Supplementary Service (SS) Control (in Dedicated or Idle mode) if the SS control string is stored as an FDN entry.
- Allow the extension of an FDN entry by adding digits to the Fixed Dialling number on a per call basis.
- Allow the emergency numbers (see Section 8.4) to be called, even if it is not an FDN entry.
- Allow normal access to ADN fields (i.e. allow ADN entries to be modified, added or deleted) and the keyboard.
- Allow use of ADNs subject to the FDN filter.

When FDN is disabled, an ME supporting FDN shall;

- Allow FDN entries to be read as though they were normal ADN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow normal access to ADN fields and the keyboard.

If the ME does not support FDN, the UE shall not allow the making ~~or receiving~~ of calls when Fixed Dialling is enabled [in the USIM, and the UE shall not allow the making or receiving of calls when Fixed Dialling is enabled in the SIM.](#)

However, emergency calls (112 and other user defined emergency numbers) shall still be possible.

NOTE: Wildcards are stored on the SIM/USIM. The wildcard coding is given in 3GPP TS 31.102 [19].

CHANGE REQUEST

22.101 CR 145 # rev **-** # Current version: **6.6.0**

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

Title:	# Alignment to TS 31.102 on FDN/BDN unsupported terminal procedure.		
Source:	# SA1 (NTT DoCoMo Inc.)		
Work item code:	# TEI	Date:	# 13/1/2004
Category:	# A	Release:	# Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# Inconsistent description between TS 22.101 and TS 31.102. In the case when FDN/BDN is enabled, FDN/BDN unsupported terminals shall not allow the receiving of calls in SA1 specifications, however they are permitted from T3 point of view. This inconsistency was introduced by the difference between GSM and UMTS service features. In GSM, FDN/BDN unsupported terminals do not make nor receive calls because IMSI is invalidated in the SIM. In UMTS, T3 introduced the new feature to enable/disable FDN/BDN feature at EF_EST in the USIM from the beginning of R99, therefore receiving calls are still allowed for FDN/BDN unsupported terminals in case FDN/BDN is enabled in the USIM. When creating UMTS specifications, this description in the TS 22.101 was not updated, so alignment is needed. In addition, the behaviour in the TS 31.102 also conforms to the current handset manufacturer's implementations.
Summary of change:	# Clarification of the text to state that FDN/BDN unsupported terminals shall allow the receiving of calls in case FDN/BDN is enabled in the USIM. It is still not possible to receive calls when FDN/BDN is enabled in the SIM. Therefore, the text is changed to so that the functionalities for the USIM and SIM cases are specified separately.
Consequences if not approved:	# Interoperability problems due to the misalignment of TS 22.101 with TS 31.102. Implementation based on TS 22.101 would result in implementations of FDN/BDN within terminals that will not allow calls to be received when FDN/BDN service is enabled in the USIM. However, implementation based on TS 31.102 would allow calls to be received in this case.

Furthermore, the inability to receive calls if implementation is based on TS 22.101 would result in unnecessary call failure and subsequent loss of revenue for the operator.

Clauses affected:	⌘	Annex A.20, A.25										
Other specs affected:	⌘	<table border="1"><tr><th>Y</th><th>N</th></tr><tr><td></td><td>X</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	⌘
		Y	N									
			X									
	X											
	X											
Test specifications												
O&M Specifications												
Other comments:	⌘											

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.

Annex A (normative): Description of optional user equipment features

[...]

A.20 Barring of Dialed Numbers

This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers belonging to a pre-programmed list of numbers in the SIM/USIM.

Barred Dialling Numbers stored in the /USIM may contain wild characters.

Under control of PIN2, "Barred Dialling Mode" may be enabled or disabled. The selected mode is stored in the SIM/USIM.

Under PIN2 control, it shall be possible to add, modify or delete a particular "Barred Dialling Number" (BDN) and to allocate or modify its associated comparison method(s). This BDN may have the function of an abbreviated dialling number / supplementary service control (ADN/SSC), overflow and/or sub-address.

When BDN is inactive, no special controls are specified, and the barred dialling numbers may be read (though not modified or deleted, except under PIN2 control) as if they were normal abbreviated dialling numbers. Access to keyboard and normal abbreviated dialling numbers (including sub-address) is also permitted.

When Barring of Dialed Numbers is active:

- Considering a number dialled by the user, if it exists a BDN for which there is a successful comparison (see below) between that BDN and the dialled number, then the ME shall prevent the call attempt to that number. If there is no BDN to fulfil those conditions, the call attempt is allowed by the ME.

With each BDN is associated one (or a combination of) comparison method(s) used between that BDN and the number dialled by the user. At least three different comparison methods are possible:

- The comparison is made from the first digit of that BDN, from the first digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- The comparison is made from the first digit of that BDN, from any digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- The comparison is made backwards from the last digit of that BDN, from the last digit of the dialled number and for a number of digits corresponding to the length of the BDN.
- If a BDN stored in the SIM/USIM contains one or more wild characters in any position, each wild character shall be replaced by any single digit when the comparison between that BDN and the dialled number is performed.
- If a BDN contains a sub-address, and the same number without any sub-address or with that sub-address is dialled, the ME shall prevent the call attempt to that number.
- Numbers specified as "barred" may only be modified under PIN2 control.
- If the ME does not support barring of dialled numbers, the UE [with a BDN enabled USIM](#) shall not allow the making ~~of or receiving~~ calls [and the UE with BDN enabled SIM shall not allow the making or receiving of calls](#). However, this feature does not affect the ability to make emergency calls.

If "Fixed Number Dialling" and "Barring of Dialed Numbers" are simultaneously active, the dialled number shall be checked against the two features before the ME allows the call attempt. In that case, a dialled number will only be allowed by the ME if it is in the FDN list and if the comparison between that number and any number from the BDN list is not successful.

The UE may support other selective barrings, e.g. applying to individual services (e.g. telephony, data transmission) or individual call types (e.g. long distance, international calls).

[...]

A.25 Fixed number dialling

This feature provides a mechanism so that by the use of an electronic lock it is possible to place a bar on calling any numbers other than those pre-programmed in the SIM/USIM.

Under control of PIN 2, "Fixed Dialling Mode" may be enabled or disabled. The mode selected is stored in the SIM/USIM.

Fixed Dialling Numbers (FDNs) are stored in the SIM/USIM in the Fixed Dialling Number field. FDN entries are composed of a destination address/Supplementary Service Control. Destination addresses may have the format relevant to the bearer services/teleservices defined in [21] and [14]. FDN entries may take the function of an Abbreviated Dialling Number/Supplementary Service Control (ADN/SSC), Overflow and/or sub-address. Fixed Dialling Numbers stored in the SIM/USIM may contain wild card characters.

The Fixed Dialling feature is optional, however when Fixed Dialling Mode is enabled, an ME supporting the feature shall;

- Prevent the establishment of bearer services/teleservices to destination addresses which are not in FDN entries on a per bearer service/teleservice basis. The list of bearer services/teleservices excluded from the FDN check shall be stored in the SIM/USIM. Those bearer services/teleservices are characterised by their service code as described in [23]. For instance if the SMS teleservices is indicated in this list, SMS can be sent to any destination. By default, the ME shall prevent the establishment of any bearer service/teleservice to destination addresses which are not in FDN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow the establishment of bearer services/teleservice to destination addresses stored in FDN entries. For SMS, the Service Center address and the end-destination address shall be checked.
- Support the reading and substitution of wildcards in any position of an FDN entry, via the ME MMI.
- Allow the user to replace each wildcard of an FDN entry by a single digit, on a per call basis without using PIN2. The digit replacing the wildcard may be used for network access or supplementary service operation.
- Only allow Supplementary Service (SS) Control (in Dedicated or Idle mode) if the SS control string is stored as an FDN entry.
- Allow the extension of an FDN entry by adding digits to the Fixed Dialling number on a per call basis.
- Allow the emergency numbers (see Section 8.4) to be called, even if it is not an FDN entry.
- Allow normal access to ADN fields (i.e. allow ADN entries to be modified, added or deleted) and the keyboard.
- Allow use of ADNs subject to the FDN filter.

When FDN is disabled, an ME supporting FDN shall;

- Allow FDN entries to be read as though they were normal ADN entries.
- Only allow modification, addition or deletion of Fixed Number Dialling entries under control of PIN2.
- Allow normal access to ADN fields and the keyboard.

If the ME does not support FDN, the UE shall not allow the making ~~or receiving~~ of calls when Fixed Dialling is enabled [in the USIM, and the UE shall not allow the making or receiving of calls when Fixed Dialling is enabled in the SIM.](#)

However, emergency calls (112 and other user defined emergency numbers) shall still be possible.

NOTE: Wildcards are stored on the SIM/USIM. The wildcard coding is given in 3GPP TS 31.102 [19].