

Technical Specification Group Services and System Aspects **TSGS#17(02)0438**  
Meeting #17, Biarritz, France, 9-12 September 2002

**Source:** TSG-SA WG4

**Title:** CRs to TS 28.062 on TFO Signalling for preferred AMR-NB Configurations and TFO Version Handling (Release 5)

**Document for:** Approval

**Agenda Item:** 7.4.3

The following CRs, agreed at the TSG-SA WG4 meeting #22, are presented to TSG SA #17 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Vers	WG	Meeting	S4 doc
28.062	033	2	Rel-5	TFO Signalling for preferred AMR-NB Configurations	F	5.1.0	S4	TSG-SA WG4#22	S4-020479
28.062	034		Rel-5	TFO Version Handling	F	5.1.0	S4	TSG-SA WG4#22	S4-020466

## CHANGE REQUEST

⌘ **28.062 CR 033** ⌘ rev **2** ⌘ Current version: **5.1.0** ⌘

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>	⌘ TFO-Signalling for preferred AMR-NB Configurations		
<b>Source:</b>	⌘ TSG-SA WG4		
<b>Work item code:</b>	⌘ TFO	<b>Date:</b>	⌘ 12/Sept/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	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 TR 21.900.		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Some AMR-NB Configurations are preferred, e.g. because they are defined in TS 34.108 for terminal conformance testing, or they are the "default" configurations in TS 28.062. This CR reflects these preferences in the TFO Signalling
<b>Summary of change:</b>	⌘ Addition of AMR-NB TFO message element
<b>Consequences if not approved:</b>	⌘ Not complete TFO Specification (intentionally left open in version 5.1.0). More complex signalling than necessary.

<b>Clauses affected:</b>	⌘ 7								
<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="width: 20px; text-align: center;"> </td> <td style="width: 20px; text-align: center;"> </td> </tr> <tr> <td style="width: 20px; text-align: center;"> </td> <td style="width: 20px; text-align: center;"> </td> </tr> </table>	Y	N					Other core specifications	⌘
Y	N								
		Test specifications							
		O&M Specifications							
<b>Other comments:</b>	⌘ In R2 the missing definition of SCS is added								

### 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.



<u>UMTS AMR 2</u>																	
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The “1” in the table indicates that the Codec Mode is included in the Active Codec Set of the Configuration.

The parameter “OM” (Optimisation Mode) defines whether the indicated Configuration can be changed to any of the other Allowed ones (OM == A) or if the change is Forbidden (OM == F). For the three “A” configurations (11, 13 and 15) the TFO Decision algorithm shall consider the SCS {1, 1, 1, 1, 1, 1, 0, 1}, i.e. all AMR modes except the 5.15 kbps shall be treated as supported and the OM shall be assumed to be “Optimisation of the ACS supported”. For the other “F” configurations the ACS and SCS shall be assumed to be identical and as shown in the configuration table. The OM shall be assumed to be “Optimisation of the ACS not supported”.

A change via Maximum Rate Control is always possible (e.g. from configurations 10, 11, 12, 13, 14, 15 to 9 and 8).  
Note: therefore configurations 12 and 13 are not essential, the code points should be kept for future extensions.

The “Y” in the table indicates, which Configuration is defined for which Codec Type.

Coding for PAR (bits 12.13.14.15):

0000: ~~to~~

1111: for further study.

~~The option “Par\_Sel=0” and the corresponding configuration codes can only be used in TFO Version 5 and onwards. A Pre REL 5 implementation does not understand it and ignores it.~~

## CHANGE REQUEST

⌘ **28.062 CR 034** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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>	⌘ TFO Version Handling		
<b>Source:</b>	⌘ TSG-SA WG4		
<b>Work item code:</b>	⌘ TFO	<b>Date:</b>	⌘ 12/Sept/2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
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	<b>A</b> (corresponds to a correction in an earlier release)	<b>R96</b> (Release 1996)	
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	<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 TR 21.900.		<b>Rel-4</b> (Release 4)
			<b>Rel-5</b> (Release 5)
			<b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Some substantial changes in TFO Signalling require a new TFO Version number		
<b>Summary of change:</b>	⌘ Change version number from 5.1 to 5.2 Delete Version 5.1 from the standard and supersede it with 5.2.		
<b>Consequences if not approved:</b>	⌘ Incompatible versions with identical version number: chaos		

<b>Clauses affected:</b>	⌘ 7								
<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="width: 20px; text-align: center;"> </td> <td style="width: 20px; text-align: center;"> </td> </tr> <tr> <td style="width: 20px; text-align: center;"> </td> <td style="width: 20px; text-align: center;"> </td> </tr> </table>	Y	N					Other core specifications	⌘
Y	N								
		Test specifications							
		O&M Specifications							
<b>Other comments:</b>	⌘								

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- 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.

## 4.3 TFO Standard Version Handling

In TFO Specifications before REL-4 no TFO version handling is defined.

In TFO Specifications of REL-4 an “AMR TFO version number” is defined in the Ver (Version number) field of the AMR\_ACS and AMR\_SCS Extension Blocks (see clause 7) and the ATVN field in AMR Configuration frames (see Annex C). Only one REL-4 AMR TFO version is defined: version “0”.

From REL-5 onwards the “TFO Version number” contained in the “TFO Version” extension block (section 7) and in “Generic Configuration Frames” (Annex H) shall reflect the Version and Subversion of the corresponding TS 28.062 (first and second digit of the TS version number, see foreword). The AMR TFO version number (Ver, AVTN, as in REL-4) shall be treated as “undefined” in case the TFO Version Number (as in REL-5 and onwards) is indicated in the TFO Messages.

The current TFO Version supports the GSM\_FR, GSM\_HR, GSM\_EFR, five AMR (Narrow Band) speech codec types (FR\_AMR, HR\_AMR, UMTS\_AMR, UMTS\_AMR\_2, OHR\_AMR: AMR-NB family) and four AMR Wide Band speech codec types (FR\_AMR-WB, UMTS\_AMR-WB, OFR\_AMR-WB, OHR\_AMR-WB: AMR-WB family).

The smallest defined TFO Version number is 0.0. It stands for all TFO Versions before 5.24. All numbers between 0.0 and 5.24 are reserved for future use. If the Local and Distant version numbers differ, the smallest version number shall have precedence and shall be applied on both sides. The following features (table 4.3-1) are optional or mandatory for the different Codec Types, depending on the applicable version number:

**Table 4.3-1: TFO Version Handling**

Feature→ Codec Type↓	TFO Version	Immediate Codec Type Optimisation	Generic Configuration Frames
GSM_FR GSM_HR GSM_EFR	<b>Optional.</b> The TFO Version extension block need not to be sent. If not contained in TFO Messages, or is lower than 5.24, then Pre-REL-5 handling shall apply	<b>Mandatory,</b> if TFO Version is 5.24 or higher.	If the TFO Version is lower than 5.24 then Generic Configuration Frames shall <u>not</u> be used. Only TFO_REQ_L and (TFO_ACK_L) shall be used.  If the TFO Version is 5.24 or higher, then Generic Configuration Frames shall be used. TFO_REQ_L and TFO_ACK_L shall <u>not</u> be used embedded into TFO Frames.
FR_AMR HR_AMR UMTS_AMR UMTS_AMR2 OHR_AMR	<b>Optional.</b> The TFO Version extension block need not to be sent. If not contained in TFO Messages, or is lower than 5.24, then Pre-REL-5 handling shall apply	<b>Mandatory,</b> if TFO Version is 5.24 or higher.	If the TFO Version is lower than 5.42, then Generic Configuration Frames shall <u>not</u> be used. <del>It is optional to use either TFO_REQ_L or AMR Configuration frames, see Annex C.8.5.</del>  If the TFO Version is 5.42 or higher, then Generic Configuration Frames shall be used. The parameter field in REL-4 AMR Configuration frames shall be treated as undefined. TFO_REQ_L and TFO_ACK_L shall <u>not</u> be used embedded into TFO Frames.
FR_AMR-WB UMTS_AMR-WB OFR_AMR-WB OHR_AMR-WB	<b>Mandatory.</b> The TFO Version extension block shall always be sent.	<b>Mandatory.</b>	Generic Configuration Frames shall be used. TFO_REQ_L and TFO_ACK_L shall <u>not</u> be used embedded into TFO Frames.