

Technical Specification Group Services and System Aspects **TSGS#19(03)0093**  
Meeting #19, Birmingham, UK, 17 - 20 March 2003

**Source:** TSG-SA WG4

**Title:** CRs to TR 26.911 - Clarification of bit-order handling for 3G-324M terminals (R99, Release 4 and Release 5)

**Document for:** Approval

**Agenda Item:** 7.4.3

The following CRs, agreed at the TSG-SA WG4 meeting #25bis, are presented to TSG SA #19 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Vers	WG	Meeting	S4 doc
26.911	011		R99	Clarification of bit-order handling for 3G-324M terminals	F	3.3.0	S4	TSG-SA WG4#25bis	S4-030220
26.911	012		Rel-4	Clarification of bit-order handling for 3G-324M terminals	A	4.1.0	S4	TSG-SA WG4#25bis	S4-030221
26.911	013		Rel-5	Clarification of bit-order handling for 3G-324M terminals	A	5.0.0	S4	TSG-SA WG4#25bis	S4-030222

## CHANGE REQUEST

# **TR 26.911 CR 011** # rev **-** # Current version: **3.3.0** #

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 of bit-order handling for 3G-324M terminals		
<b>Source:</b>	# TSG SA WG4		
<b>Work item code:</b>	# CSM	<b>Date:</b>	# 18/03/2003
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# R99
	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>	# During interoperability tests it was found that some implementors do not correctly implement the bit order of H.223 streams when transmitting over UTRAN network. This CR clarifies the correct usage of the bit order by referencing to the appropriate technical specifications.
<b>Summary of change:</b>	# Clarification of the correct bit-order usage.
<b>Consequences if not approved:</b>	# If this CR is not agreed then there is potentially a high risk that implementations will not be 3GPP compliant and interoperability problems will occur.

<b>Clauses affected:</b>	# 2, 5						
<b>Other specs affected:</b>	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Y</td> <td style="border: 1px solid black; padding: 2px;">N</td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N				
Y	N						
<b>Other comments:</b>	# New clause 5.1 should be added at end of section 5 (Multiplex Protocol)						

### How to create CRs using this form:

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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.

## 2 References

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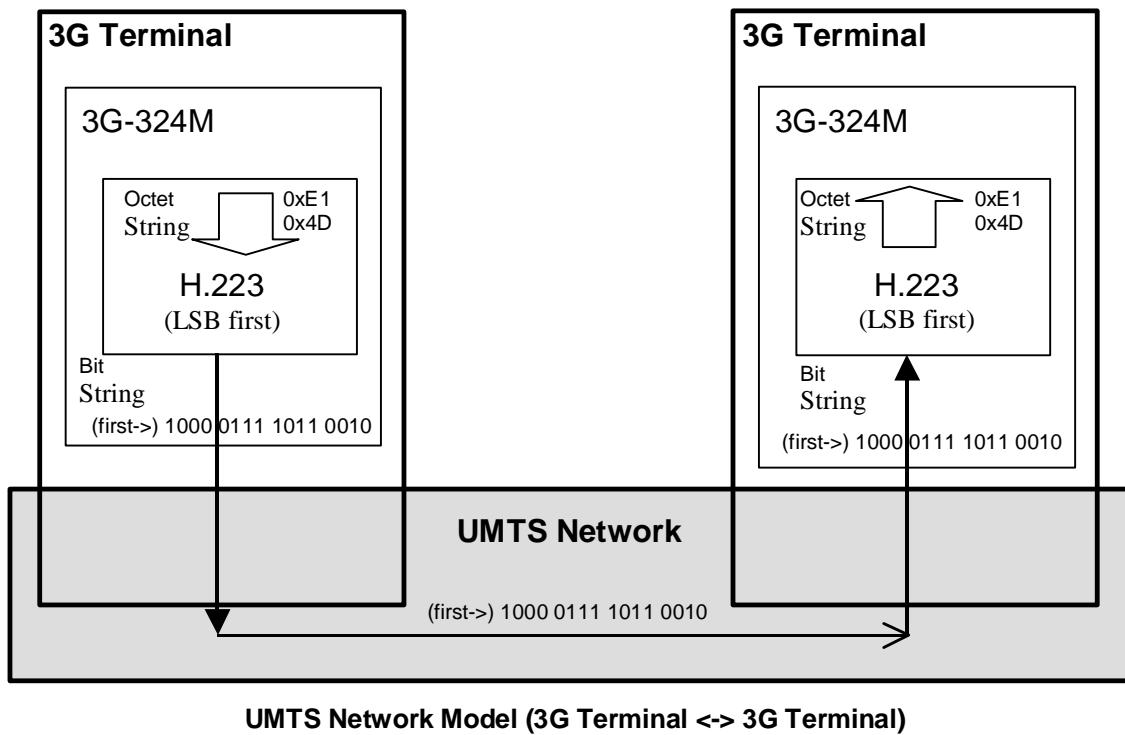
- [1a] ITU-T Recommendation H.223: “Multiplexing protocol for low bitrate multimedia communication”
- [1b] ITU-T Recommendation H.223 – Annex A: “ Multiplexing protocol for low bit rate multimedia mobile communication over low error-prone channels “
- [1c] ITU-T Recommendation H.223 – Annex B: “ Multiplexing protocol for low bit rate multimedia mobile communication over moderate error-prone channels “
- [1d] ITU-T Recommendation H.223 – Annex C: “ Multiplexing protocol for low bit rate multimedia mobile communication over highly error-prone channels “
- [2] ITU-T Recommendation H.245: “Control protocol for multimedia communication”
- [3] ITU-T Recommendation H.261: “Video codec for audiovisual services at px64 kbit/s”
- [4] ITU-T Recommendation H.324: “Terminal for low bitrate multimedia communication”
- [5] ITU-T Recommendation G.723.1: “Dual rate speech coder for multimedia communications transmitting at 5.3 and 6.3 kbit/s”
- [6] ITU-T Recommendation H.263: “Video coding for low bit rate communication”
- [7] 3<sup>rd</sup> Generation Partnership Project (3GPP), TSG-SA Codec Working Group, 3GPP TS 26.110, Codec(s) for Circuit Switched Multimedia Telephony Service: General Description
- [8] 3<sup>rd</sup> Generation Partnership Project (3GPP), TSG-SA Codec Working Group, 3GPP TS 26.111, Codec(s) for Circuit Switched Multimedia Telephony Service, Modifications to H.324
- [9] 3<sup>rd</sup> Generation Partnership Project (3GPP), TSG-SA Codec Working Group, 3GPP TS 26.112, Codec(s) for Circuit Switched Multimedia Telephony Service, Call Set Up Requirements
- [10] 3<sup>rd</sup> Generation Partnership Project (3GPP), TSG-SA Codec Working Group, 3GPP TR 26.912, Quantitative performance evaluation of H.324 Annex C over 3G
- [11] International Standard ISO/IEC 14496-2, Information technology -Generic coding of audio-visual objects- Part 2: Visual, 1999
- [12] ISO/IEC JTC1/SC29/WG11 MPEG 99/N2724 “MPEG-4 Applications”, March 1999
- [13] [3<sup>rd</sup> Generation Partnership Project \(3GPP\), 3GPP TS 25.301, Radio Interface Protocol Architecture](#)

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### [5.1. H.223 Multiplex Transmission Bit Order](#)

[H.223 multiplex transmission bit order is defined in H.223 \[1a\] Sec 3.2.2 as LSB first. This first bit is transparently mapped to the first bit of “higher layer PDU” depicted in 5.3.5 of TS25.301 \[13\], and vice versa.](#)

[An example is given by the following figure:](#)



## CHANGE REQUEST

# **TR 26.911 CR 012** # rev **-** # Current version: **4.1.0** #

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>	# Clarification of bit-order handling for 3G-324M terminals		
<b>Source:</b>	# TSG SA WG4		
<b>Work item code:</b>	# CSM	<b>Date:</b>	# 18/03/2003
<b>Category:</b>	# <b>A</b>	<b>Release:</b>	# Rel-4
	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)
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<b>Reason for change:</b>	# During interoperability tests it was found that some implementors do not correctly implement the bit order of H.223 streams when transmitting over UTRAN network. This CR clarifies the correct usage of the bit order by referencing to the appropriate technical specifications.
<b>Summary of change:</b>	# Clarification of the correct bit-order usage.
<b>Consequences if not approved:</b>	# If this CR is not agreed then there is potentially a high risk that implementations will not be 3GPP compliant and interoperability problems will occur.

<b>Clauses affected:</b>	# 2, 5						
<b>Other specs affected:</b>	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">Y</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">N</td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> </tr> <tr> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N				
Y	N						
<b>Other comments:</b>	# New clause 5.1 should be added at end of section 5 (Multiplex Protocol)						

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- [1] ITU-T Recommendation H.223 (1996): "Multiplexing protocol for low bit rate multimedia communication".
- [2] ITU-T Recommendation H.223 – Annex A (1998): "Multiplexing protocol for low bit rate multimedia mobile communication over low error-prone channels".
- [3] ITU-T Recommendation H.223 – Annex B (1998): "Multiplexing protocol for low bit rate multimedia mobile communication over moderate error-prone channels".
- [4] ITU-T Recommendation H.223 – Annex C (1998): "Multiplexing protocol for low bit rate multimedia mobile communication over highly error-prone channels".
- [5] ITU-T Recommendation H.245 (2000): "Control protocol for multimedia communication"
- [6] ITU-T Recommendation H.261 (1993): "Video codec for audiovisual services at px64 kbit/s"
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- [11] 3GPP TS 26.111: "Codec for Circuit Switched Multimedia Telephony Service, Modifications to H.324".
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- [14] International Standard ISO/IEC 14496-2: "Information technology - Coding of audio-visual objects - Part 2: Visual".
- [15] ISO/IEC JTC1/SC29/WG11 MPEG 99/N2724: "MPEG-4 Applications", March 1999.
- [16] ITU-T Recommendation V.80: "In-band DCE control and synchronous data modes for asynchronous DTE".
- [17] [3<sup>rd</sup> Generation Partnership Project \(3GPP\), 3GPP TS 25.301, Radio Interface Protocol Architecture](#)

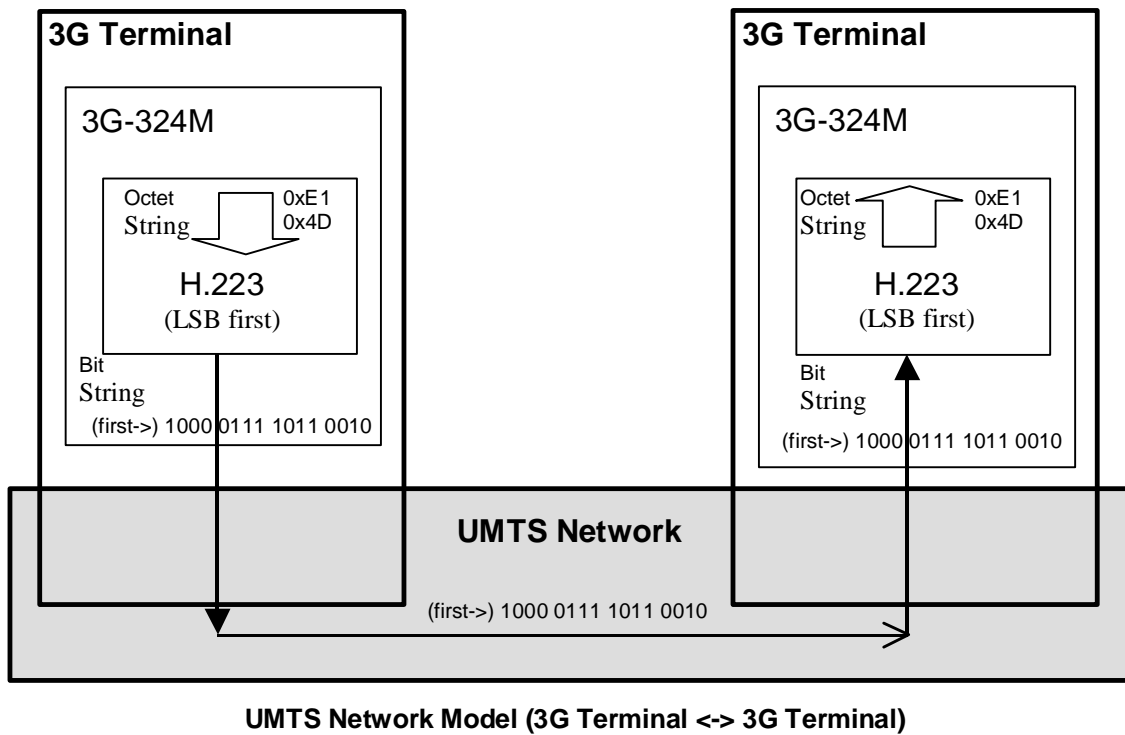


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### 5.1. H.223 Multiplex Transmission Bit Order

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An example is given by the following figure:



## CHANGE REQUEST

# **TR 26.911 CR 013** # rev **-** # Current version: **5.0.0** #

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 of bit-order handling for 3G-324M terminals		
<b>Source:</b>	# TSG SA WG4		
<b>Work item code:</b>	# CSM	<b>Date:</b>	# 18/03/2003
<b>Category:</b>	# <b>A</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)
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Y	N								
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