3GPP TSG-T (Terminals) Meeting #18
New Orleans, Louisiana, USA
4 - 6 December, 2002

TP-020317

3GPP TSG-T2 #19
Bundang, Korea
18 -22 November 2002

T2-020947

Title:	LS on Alignment of MMS Message Size definition
Response to:	LS T2-020843 (S5-024337) on MMS Volume Definition from SA5
	LS T2-020846 (BARG Doc 225/02) on MMS Message Definition from CPWP
Release:	REL-5
Work Item:	
Source:	T2
To:	SA5, GSMA/BARG/CPWP
Cc:	SA, T

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Attachments: T2-020943 [CR 23.140 REL-5]

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1. Overall Description:

T2 thanks SA5 and CPWP for their incoming LS's (referenced above), which kindly invited T2 to modify the definition of Message Size in TS 23.140 REL-5, in order to better match operators charging requirements. The new proposed definition can be briefly summarised as "*the MMS Message Size is the total length in octets of the Subject field plus all the Media Objects included in the MM*". Please note that the current MM size definition does not alter the principles behind SA5's current definition in 3GPP TS 32.235 REL-4. However, ambiguities in SA5's definition which are due to the MMS message format needed to be clarified. Hence, T2 improved the definition.

Given for granted the sound business motivations behind the new proposed definition, T2 rather focused on a thorough analysis and clarification of all the technical aspects inherent to the new definition, some of which were found to be non-trivial ones.

Attached to the present LS, there is the CR 23.140 REL-5 that implements the new proposed definition. Given the current status of the MMS specifications, T2 believes that this is the best technical definition that matches the general requirement above. Nevertheless, T2 believes that this definition has some minor limitations, which will be clarified in this LS.

1.1 Assumptions

T2 wishes to make explicit what they believe are a couple of reasonable *assumptions* they made in order to avoid potential implementation ambiguities:

- #1 (Subject field) - The length of the Subject field is intended to be the number of octets that constitute (the encoding of) the characters entered by the MM sender as the value of the Subject field. In other words, the (encoding of the) Subject field label itself, which of course has a fixed length, is not included.
- #2 (Media Objects) - The octets that contribute to MM Size are only those representing the true content, i.e. excluding MIME separators and additional headers.

- #3 (Media Objects) – In case of mixed/multipart MIME objects, the assumption #2 applies only to the top-level media objects in the MIME document that constitutes the MM. This further assumption was introduced in order to avoid that the MMS Relay/Server shall dig into the mixed/multipart structure in order to recursively extract all the embedded MIME separators and headers.

1.2 Known limitation and suggested workaround

T2 wishes to highlight a couple of known minor *limitations* of the new technical definition and suggest a possible workaround to cope with the second of them.
Firstly, in general, it cannot be assumed that each character typed into the Subject field shall correspond to an octet (e.g. when certain Asiatic characters are used).
Secondly, because of the different encoding schemes that can be applied at the MM1 and MM4 reference points, in certain cases the length of (the encoding of) the Subject field may differ across the MM1 and MM4 reference points.
However, due to the limited number of characters that can be entered into the Subject field, this is not believed to be a major problem. Nevertheless, the consequence is that it is not possible to grant that, in general, the MM Size results always exactly (i.e. at the level of octet) the same at the MM1 and MM4 reference points.
The suggested workaround is to represent the MM Size with a minor precision, i.e. using kilobytes (KB) rather than bytes. This provision, together with the definition of 'guard bands' if 1 or 2 KB around each volume class separator, should permit at the MMS rating engine to cope with the issue.

1.3 Alignment of the specifications

Considering that the CR 23.140 here described only applies to REL-5, T2 would propose to SA5 the following action for aligning the 32.235 REL-4 and REL-5 specifications with the 23.140 REL-5 specification.

2. Actions:

To SA5 group.

ACTION: **T2** kindly asks SA5 to change TS 32.235 REL-4 such that it copies the MMS Message Size definition specified in TS 23.140 REL-5. Furthermore, T2 kindly asks SA5 to make the 32.235 REL-5 and future releases to ***refer*** to the definition in 23.140 REL-5.

3. Date of next T2 Meetings:

T2#20	20-24 Jan 2003	San Francisco, US
T2#21	12-16 May 2003	US

3GPP TSG-T2 #19
Bundang, Korea
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T2-020940

CR-Form-v7

CHANGE REQUEST

⌘ **23.140** **CR** **CRNum** ⌘ **rev** **-** ⌘ Current version: **5.4.0** ⌘

*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 [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	MMS message size definition and its support on the MMS UA.
Source:	⌘	Vodafone, Orange, Telia, T-Mobile
Work item code:	⌘	MESS-5-MMS
Date:	⌘	12/11/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Align the T2 definition of MMS message size with the SA5 definition, approved at SA #17 plenary. One suitable definition of message size is needed, for example for charging purposes. For reasons of clarity towards the end-user, and as requested by GSMA BARG, the MMS UA should provide the originating end-user with an indication of the message size, prior to message submission.
Summary of change:	⌘	The size of a message is defined as the total length, in octets, of the Subject information element and of all the Media Objects, including the Presentation media object (e.g. SMIL).
Consequences if not approved:	⌘	Misalignment would remain between the definitions of message size specified in different MMS-related specifications (32.235 and 23.140). Moreover, the current T2 definition of message size would remain, which does not satisfy operators requirements expressed by GSMA/BARG.

Clauses affected:	⌘	4.4; 5.1.1

Other specs Affected:	⌘	Y	N		⌘	
		X		Other core specifications		32.235
				Test specifications		
				O&M Specifications		

Other comments:	⌘	The proposed change is recommended also by the GSMA.

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.

4.4 Message Size Measurement

~~Message size is calculated as if the MM were transmitted over MM1 assuming MM1 Submission or Retrieval of the MM.~~

~~The Message size is defined as the number of octets of the entire MM, i.e., in an MM1 implementation the Message size includes the size of all headers and the MM content.~~

~~The Message size of the same MM can be considerably different for Submission or Retrieval in case of content adaptation in the Retrieval case.~~

~~The Message size is dependent on the actual MM1 specific technical realization. For example the Message size for the WAP MMS realisation [56] is defined as the full size of the associated M-Send-req PDU in octets in case of Submission or M-Retrieve.conf PDU in octets in case of Retrieval.~~

The Message size is defined as the sum of the Subject information element size and the size of all the MM element(s), including the Presentation object (e.g. SMIL). Other information elements of a MM shall be excluded from the message size calculation.

4.4.1 Size of Subject information element

The size of the Subject information element shall be calculated as the length of the subject field in octets excluding the "Subject: " token.

4.4.2 Size of an MM element

The size of an MM element shall be calculated as the total number of octets of the media object, i.e. raw data without any boundaries or additional headers which are due to MIME-based encodings of the MM.

In case of an MM element being a multipart/mixed or multipart/related MIME message, the total number of octets contained in the body of that MIME message (i.e. that MM element) shall be counted including only the boundaries and additional headers which are part of the MIME message (i.e. that MM element).

NOTE 1: It is understood that due to the different encoding used in the MM4 reference point for the Subject field, there can be a slight discrepancy in the message size calculated over the MM1 and MM4 reference points.

NOTE 2: The message size of a submitted MM might differ from the message size of a retrieved MM if content adaptation is performed prior to its retrieval.

5 Functional Description of Involved MMS Elements

5.1 MMS User Agent

5.1.1 MMS User Agent operations

The MMS User Agent shall provide the following application layer functionalities:-

- the retrieval of MMs (initiate MM delivery to the MMS User Agent);
- terminal capability negotiation.

The MMS User Agent may provide additional application layer functionalities such as:-

- the MM composition
- the presentation of an approximate MM Size prior to MM submission;

- the MM submission
- the MM presentation;
- the presentation of notifications to the user;
- the signing of an MM on an end-user to end-user basis;
- the decryption and encryption of an MM on an end-user to end-user basis;
- all aspects of storing MMs on the terminal;
- handling of MMS-related information on the USIM, if the USIM supports MMS;
- management and presentation of MMBox content;
- the handling of external devices;
- the user profile management.

This optional list of additional functionalities of the MMS User Agent is not exhaustive.