3GPP TSG SA WG3 Security — S3#29 **S3-030314**
15 - 18 July 2003
San Francisco, USA

TSG-SA WG4#26 ***Tdoc S4-030415~~361~~***
May 5 – 9, 2003, Paris, France Agenda item: 4

Title: **Reply to "**Reply to **Liaison Statement on MBMS Codec Requirements**~~Reply to LS on <Meaning of the 'transfer delay' QoS attribute for packet-switched streaming bearers>~~"

Response to: S4-030323~~277~~

Source: ~~TSG~~ SA ~~WG~~4
To: ~~TSG SA WG2, GERAN WG2~~SA2
Cc: SA1, SA3, SA5, RAN2, RAN3, GERAN1, GERAN2, CN1

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Attachments: S4-030414.~~None.~~

1. Overall description

SA4 thanks SA2 for the LS response on MBMS codec requirements. SA4 understands that, in order to define a complete MBMS application, a full specification with details on data types, codecs, formats and transport/application protocols is required.

Since SA4 has been given ownership of the definition of the above features, SA4 has produced a WID on MBMS (see attached document).

SA4 also understands that the main use cases for MBMS are streaming, MMS and short-time downloading. However, it is not clear what short-time downloading means.

In order to clarify some MBMS open issues~~SA4 thanks <whoever> for the liaison on transfer delay, and we wish to clarify our understanding of the UE behavior, and ask a question.~~
~~We understand that the 'transfer delay' requested of the network sets the time interval within which 95% (on average) of the packets will arrive, and 5% of the packets will experience larger delay.~~
~~The UE typically has a desired limit for its internal delay caused by de-jittering; this limit may be set by memory requirements, or desired responsiveness to the user, for example. This de-jitter delay can be expressed in time. We understand (obviously) that the size of the buffer (in bytes) is equal to the bandwidth multiplied by the de-jitter delay.~~
~~The UE also has a loss percentage it is able to tolerate. This is typically smaller than the 5% quoted above.~~
~~We therefore believe that the transfer delay requested of the network is a function of the de-jitter delay in the UE and the tolerable loss percentage. In the case that the tolerable loss percentage is 5%, the requested transfer delay equals the de-jitter delay. If the tolerable loss is less than 5%, then the UE would request a transfer delay smaller than its de-jitter delay; the de-jitter buffer then captures more of the distribution of delay values.~~
~~Clearly in order to give effective guidelines in the SA4 specifications, we need to give some guidance about the shape and parameters of the distribution of delay values. Is <someone> able to give SA4 some information about the expected long-term overall delay distribution and relevant parameters beyond mean delay?~~ from SA4 point of view, SA4 ~~proposes~~ feels it useful to organise a joint MBMS

ad-hoc meeting between the relevant WGs (date/location TBD) on use cases and application architecture. SA4 Chairman will contact the WG Chairmen on the issue.~~.~~

~~It might be useful to clarify that the **transfer delay** should typically be determined by the UE using the guaranteed bandwidth and any mechanism applied by the UE to handle network de-jittering. However it has been felt that 23.107 being independent of any given application is not the proper specification to put such a clarification and that SA4 26.234 appendix J would be a better place to put such a clarification.~~

3. Actions to SA2:

In order to get a better understanding of the MBMS application use cases, SA4 kindly requests SA2 to clearly define the meaning of **short-time** downloading.

4. Date of Next TSG-SA WG4 Meeting:

Meeting	Date	Location	Host
SA4#27	7~~-~~11 July~~April~~ 2003	Munich~~Seoul, Korea~~, Germany	~~Samsung~~Siemens
SA4#28	1-5 September~~12 - 16 May~~ 2003	~~USA~~TBD	~~NAF3~~TBD

Tdoc S4-~~-~~03~~)~~0414~~370~~

Source:	**Nokia**[1]
Title:	**~~Draft~~ WID for Multimedia Broadcast/Multicast Service (MBMS) codecs and protocols**
Document for:	**Discussion and Approval**

1. Introduction

This document contains the Work Item Description for MBMS codecs and protocols. It has to be pointed out that SA4 work and progress is subject to a deeper understanding of MBMS use cases and architecture and is dependent on the stability of Stage 2, RAN and GERAN specifications that relate to MBMS. In particular, SA4 believes that the specification on MBMS codecs and protocols can be completed about 3-6 months after the related Stage 2, RAN and GERAN specifications have been produced.

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Work Item Description

Multimedia Broadcast/Multicast Service (MBMS) Codecs and Protocols

1 3GPP Work Area

	Radio Access
	Core Network
X	Services

2 Linked work items

MBMS (2544)
Packet Switched Streaming Service (34022)
MMS Enhancements (42009)
DRM (31010)

The relevant WGs will be kept informed of the progress of the work in SA4 (in particular SA1, SA2, SA3, SA5, CN1, RAN2, RAN3, GERAN1 and GERAN2).

3 Justification

Following on development of Sstage 1 and 2 of MBMS specifications that define the bearer service for MBMS, there is now the need to define a limited set of media codecs, formats and transport/application protocols for MBMS.

4 Objective

This work item will cover the definition of a set of media codecs, formats and transport/application protocols that will fulfil the requirements for MBMS service defined in Sstage 1 specification (TS 22.146). The specification work will take into consideration the need to maximize the reuse of existing features of other 3GPP services. The impact of DRM will be taken into account within the work.

5 Service Aspects

The work item defines the media codec, format and transport/application protocols to support MBMS services. Reuse of PSS and MMS features will be considered.

6 MMI-Aspects

None.

7 Charging Aspects

Outside the scope of this work item. Covered in the linked MBMS service definition work in SA5.

8 Security Aspects

The main security responsibility for this work item is owned by SA3. ~~OMA is responsible for DRM.~~ SA4 will take guidance from ~~both groups.~~SA3.

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes		✓	✓	✓	
No	✓				
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
	MBMS~~??~~ codecs and protocols	SA4	SA2, SA3	3 months after ~~the~~ stable base specifications	6 months after ~~the~~ stable base specs	The base specifications are Stage 2, RAN and GERAN MBMS specs.

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments

11 Work Item Rapporteur

Igor Curcio (Nokia)

12 Work Item Leadership

TSG SA WG4

13 Supporting Companies

Vodafone, 3, Siemens, Nortel Networks, Nokia, Ericsson, Microsoft.

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature

Multimedia Broadcast and Multicast Service

14c The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)