3GPP TSG RAN Meeting #21 **RP-030466**
Frankfurt, Germany, 16 - 19 September 2003

3GPP TSG-SA2 Meeting #34 **S2-033219**
Brussels, Belgium, 18th – 22nd August 2003

Title:	Reply LS on Implementability of MBMS Requirements and Architecture
Response to:	LS (GP-031730 / S2-032346) on Implementability of MBMS Requirements and Architecture
Release:	Release 6
Work Item:	MBMS
Source:	SA2
To:	TSG GERAN
Cc:	TSG SA1, TSG RAN, TSG SA4

Contact Person:

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Attachments: None

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1. Overall Description:

SA2 thanks TSG-GERAN for their LS on Implementability of MBMS Requirements and Architecture in GP-031730 (S2-032346) and would like to make the following comments in response to the questions asked :

Q1: TSG GERAN kindly asks TSG SA1 and SA2 to take into account the four limitations that were listed for point-to-multipoint radio bearers and confirm if appealing services can still be provided.

A1: SA2 will take the four limitations into account as advised by TSG-GERAN. However, with respect to "appealing services", SA2 believes that this falls outside the scope of SA2. It may fall under the scope of SA1 or in fact is an issue that is outside the scope of 3GPP altogether, and ought to be left to operators. SA2 has started to capture these limitations in the stage 2 TS. This allows MBMS user services (service/application that use the MBMS bearer service) to take the limitations into account and to implement strategies to obtain the overall end-to-end performance required by the MBMS user service, e.g. repetition of MBMS sessions or selective retransmission on ptp PDP bearers individually per UE.

Q2: Especially, TSG GERAN would like to know whether the requirement for provision of background traffic class over a point-to-multipoint bearer is at all valid.

A2: SA2 believes that the requirement for provision of background traffic class over a point-to-multipoint bearer for GERAN is in fact valid. It is understood that background traffic class applications such as datacasting (non-realtime downloading) of short video clips, MP3 files, etc will be offered in GERAN. SA2 understands that point-to-multipoint (ptm) bearers will not support the full range of QoS capabilities specified in 23.107 for streaming or background traffic classes. SA2 finds it useful to describe the offered range of QoS attributes in the stage 2 TS 23.246 and would appreciate more input from GERAN on this aspect.

Q3: TSG GERAN also asks TSG SA1 and SA2 to consider the 2 optimisations that were proposed.

A3: With respect to the 2 optimizations which were:

- *To avoid changes between point-to-point and point-to-multipoint radio bearers during an MBMS session (i.e. while data transfer is on-going) it was suggested to limit every MBMS session in time (e.g. less than 1 minute). MBMS clips longer than the limit could then be transmitted over concatenated MBMS sessions.*

- *To limit data loss at cell change, which cannot be avoided, application layer protection could be used even though it would require large buffers (storage to allow the error correcting code to be applied to the whole clip).*

W.r.t bullet point 1, SA2 does not believe that it is possible to limit the MBMS session time as this defined by the MBMS user service.

Further, SA2 wants to inform GERAN that there are no explicit requirements regarding a preference for ptp or ptm MBMS radio bearers, nor changing between ptp and ptm MBMS radio bearers. The requirement is for the efficient use of resources. However, GERAN may want to study the use of ptm MBMS radio bearers only, to overcome the problem described in bullet 1 above.

W.r.t bullet point 2, SA2 believes that this falls outside the scope of SA2 and ought to be left to the design of MBMS user services to implement strategies for obtaining the appropriate QoS within the limits of MBMS radio bearers. MBMS user services that suffer limited data loss at cell change might have to use streaming traffic class with low transfer delay and/or long interleaving.

2. Actions:

To TSG-GERAN:

SA2 asks GERAN to note the answers to the above questions and to provide advice on any GERAN inputs such as the range of QoS attributes that can be supported in GERAN for MBMS.

3. Dates of Next SA2 Meetings:

SA2#35	27th – 31nd October, 2003	Bangkok, Thailand
SA2#36	24th – 28th November, 2003	Sophia Antipolis, France