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**3GPP TSG RAN2#41**  
**Malaga, Spain, 16-20 February 2004**

**R2-040709**

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**Title:** Reply LS (to S4-030847) on Multiple MBMS Issues from SA-WG2 (S2-040459)  
**Release:** 6  
**Work Item:** MBMS  
**Source:** RAN2  
**To:** SA2  
**Cc:** SA4, GERAN2, SA1, RAN, RAN4, GERAN, RAN1, RAN3, GERAN1  
**Contact Person:**  
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**Attachments:** None.

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## 1. Introduction

RAN2 would like to thank SA2 for their liaison Reply LS on "Multiple MBMS Issues" provided in S2-040459 (R2-040375).

## 2. Response

Related to the two points that are raised by SA2 in this liaison, RAN2 would like to make the following comments:

### 1. Cell synchronization for 'download and play'

RAN2 already discriminates between the case of neighbouring cells which have a quite aligned timing and the case in which larger time gaps may exist.

The first case would typically correspond to the intra-RNC case. In this case the RAN2 TR foresees sharing of higher layer RAN protocol entities (e.g. one PDCP/RLC entity for multiple cells). For this case also Selection Combining might be supported by the UE when receiving transmissions from different cells.

The second case would typically correspond to the inter-RNC case. Here protocol entities will be different for different cells and the UE will e.g. have to re-establish most parts of the higher layer RAN protocol layers. In this case, bigger service gaps may exist at cell change.

RAN2 is currently not aware of any problems related to this issue at RAN level.

### 2. Parallel MBMS bearers

RAN2 confirms that if different MBMS transport bearers are used in parallel to realise a certain MBMS user service, it might indeed be beneficial to inform the UTRAN about this. Since the UE capabilities e.g. w.r.t. receiving multiple physical channels in parallel might be limited, it could be beneficial to multiplex these different MBMS transport bearers on the same physical channel.

RAN2 has so far not really considered the issue of having multiple MBMS transport bearers for delivering one MBMS user service to the UE. RAN2 would appreciate to understand the parallel usage of MBMS transport bearers for one MBMS user service in more detail. Therefore RAN2 would appreciate input on the following questions:

- a) RAN2 assumes that when multiple MBMS transport bearers are used for one MBMS user service, these MBMS transport bearers will be established using separate SESSION START messages over Iu. Will the MBMS sessions for these two MBMS transport bearers normally be established and released around the same time, or could these MBMS transport bearers be established/released at quite different points in time ?

Assuming that we have some kind of "linking" for MBMS transport bearers used in parallel for providing 1 MBMS user service:

- b) Will users want to receive always either both or none of the linked MBMS transport bearers ? Or could there be situations in which certain users would only have joined / be interested to receive one of the two MBMS transport bearers ?

### **3. Actions**

**To SA2 group.**

**ACTION:** SA2 is kindly requested to answer the indicated questions.

### **4. Date of Next TSG-RAN2 Meetings:**

TSG RAN WG2 #42	10-14 May 2004	Montreal, Canada
TSG RAN WG2 #43	16-20 Augustus 2004	Prague, Czech Republic