
Source: SA1
Title: Minor corrections to TS 22.246 MBMS User Services Rel-6)
Document for: Approval
Agenda Item: 7.1.3

Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-25	SP-040505	22.246	005	-	Rel-6	D	Minor corrections to TS 22.246 (MBMS User Services)	6.1.0	6.2.0	S1-040634

CR-Form-v7

CHANGE REQUEST⌘ **22.246 CR 005** ⌘ rev **-** ⌘ Current version: **6.1.0** ⌘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

Title:	⌘ Minor corrections to TS 22.246 (MBMS User Services)	
Source:	⌘ SA1 (NTT DoCoMo)	
Work item code:	⌘ MBMS	Date: ⌘ 28/6/2004
Category:	⌘ D	Release: ⌘ Rel-6
	Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)
	B (addition of feature),	R97 (Release 1997)
	C (functional modification of feature)	R98 (Release 1998)
	D (editorial modification)	R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4 (Release 4)
		Rel-5 (Release 5)
		Rel-6 (Release 6)

Reason for change:	⌘ Several minor errors exist within TS 22.246 (MBMS User Services). These need to be corrected before the Rel-6 specification set is frozen (provisionally planned for September 2004).
Summary of change:	⌘ Minor editorial modifications are made in chapters 5, 6.1 and Annex A.
Consequences if not approved:	⌘ Errors will remain within TS 22.246 resulting in a reduced usability of the specification.

Clauses affected:	⌘ 5, 6.1, Annex A									
Other specs affected:	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	⌘ Other core specifications ⌘ Test specifications ⌘ O&M Specifications
Y	N									
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Other comments:	⌘ As these changes proposed are purely editorial there are no impacts to UICC apps, ME, Radio Access Network, or Core Network due to this CR. Therefore, no impacts have been indicated within the ' Proposed change affects: ' clause above.									

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.

1st Modified Section

5 High level requirements

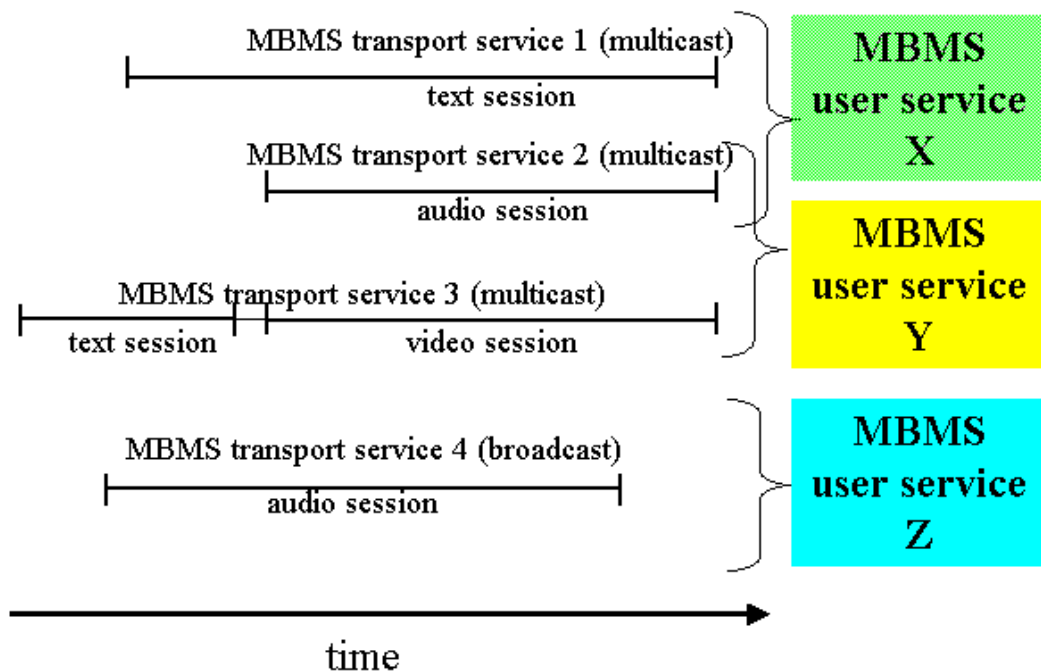
MBMS user services are services an operator may provide to subscribers. MBMS user services use the capabilities of MBMS. The operator may provide such services on his own or in collaboration with third party service providers. In addition, an MBMS user service may be provided to the operator's own subscribers and/or to inbound roaming subscribers from other operators.

MBMS User Services

MBMS user services are based on broadcast- or multicast services, which are defined in TS 22.146 [2]. An MBMS user service may use one or more broadcast- or multicast services at a time.

Note 1: A single broadcast- or multicast service can only have one broadcast- or multicast session at any time. A broadcast- or multicast service may consist of multiple successive broadcast- or multicast sessions. (see TS 22.146 [2])

Note 2: As part of the same multicast service, it should be possible for the operator to provide the UEs with multiple successive sessions with different quality-of-service for each session. (see TS 22.146 [2])



It shall be possible for an MBMS user service to make use of different application independent MBMS transport services at different times or in parallel. The MBMS transport services used may vary for instance in QoS parameters or target broadcast or multicast area.

It shall be possible for one application independent MBMS transport service to be used by more than one MBMS user service at a time.

If an MBMS user service makes use of several application independent MBMS transport services then these may only consist of either broadcast or multicast services, but not of a combination of both.

Note: The combination of broadcast- or multicast services in future releases is FFS

When necessary, within a single MBMS user service, it shall be possible to synchronize the media sessions.

NOTE: For different application independent MBMS transport services to support a single MBMS user service it may be necessary to logically link the transport services to each other, as illustrated in the figure for the audio- and video session of MBMS user service X.

The UTRAN and GERAN shall provide protection against normal transmission errors (eg interference not related to cell changes and handovers).

The BM-SC is responsible for providing protection e.g. FEC, long interleaving and/or point to point repairing the transmission, against errors (eg those caused by cell changes and longer breaks in transmission).

Service examples

MBMS user services may be classified according to [the table ~~XXX~~ within Annex A of this specification](#) into several service examples, which are characterized by

- Their predominant broadcast- or multicast service, that constitutes this MBMS user service together with its reliability (QoS) and data transfer rate requirements
- Media types that are transmitted via this broadcast- or multicast service
- Type of the service, which implies handling of the distributed media by the UE (e.g. download for subsequent presentation, streaming for instant presentation or carousel downloading)
- Charging characteristics
- A potential requirement for point-to-point delivery verification for delivered content.

To express the requirements for standardised service types are one objective of the present specification.

Service classes

MBMS user services may be provided for many purposes to the user and may convey information of various kinds. E.g. some services may be used for traffic information, others for entertainment or for news services. Service classes denote a classification of MBMS user services according to their usage. However, service classes are not in the scope of 3GPP standardisation but may be subject of inter-operator service arrangements.

Next modified section

6.1 Charging

The MBMS User Service shall support standardized mechanisms to transfer charging related information. ~~in-between~~

It shall be possible to charge for MBMS content the user receives while roaming in a VPLMN.

As indicated in Annex A some services will require an indication that MBMS content has been received. Therefore it shall be possible for the UE to provide such an indication.

The MBMS User Service shall support the following charging mechanisms :

- Charging on a subscription basis
- Charging for keys that that allow the user access to the data

Next modified section

Annex A (informative): Use Cases

Service Example	Media	Distribution Scope	MBMS User Service Classification	Application Bit rate Note 1	Delivery Verification Required Note 3	User Charging Note 4
Reliable text distribution (eg Local news)	Text	Multicast	Download	Up to 10 kbps	Yes	Event
Unverified text distribution	Text	Multicast, Broadcast	Carousel, download	Up to 10 kbps	No	-
Text distribution with still images and/or low quality video	Text, Still images, Video (e.g. 3fps)	Multicast, Broadcast	Carousel, download	Up to 32 kbps	Service dependent	User service dependent Note 2
Audio streaming	Stereo Audio	Multicast	Streaming	Up to 48kbps	Service dependent	-
Audio streaming	Stereo Audio	Broadcast	Streaming	Up to 48kbps	No	-
Audio download	Stereo Audio	Broadcast	Download	Up to 48kbps	Service dependent	-
Audio download	Stereo Audio	Multicast	Download	Up to 48kbps	Yes	Event
Audio distribution with low quality video	Stereo Audio, Video (e.g. 3fps)	Broadcast	Streaming	Up to 128kbps Note 5	No	-
Audio distribution with low quality video	Stereo Audio, Video (e.g. 3fps)	Multicast	Streaming	Up to 128kbps Note 5	Service dependent	-
Audio distribution with low quality video	Stereo Audio, Video (e.g. 3fps)	Broadcast	Download	Up to 128kbps Note 5	Service dependent	-
Audio distribution with low quality video	Stereo Audio, Video (e.g. 3fps)	Multicast	Download	Up to 128kbps Note 5	Yes	Event
Video streaming	Video & supplementary data (e.g. text, still images)	Broadcast	Streaming	Up to 384 kbps Note 5	No	-
Video streaming	Video & supplementary data (e.g. text, still images)	Multicast	Streaming	Up to 384 kbps Note 5	Service dependent	-
Video distribution	Video & supplementary data (e.g. text, still images)	Broadcast	Download	Up to 384 kbps Note 5	Service dependent	-
Video distribution	Video & supplementary data (e.g. text, still images)	Multicast	Download	Up to 384 kbps Note 5	Yes	Event
General Content Distribution	Video, Audio, File Data (binary data)	Broadcast	Carousel, download	Up to 384 kbps Note 5	Service dependent	-
General Content Distribution	Video, Audio, File Data (binary data)	Multicast	Carousel, download	Up to 384 kbps Note 5	Yes	Event
Secure data download	File; eg UE type specific and/or application specific	Multicast	Carousel, download	Up to 10kbps	-	-

	software					
<p>Notes :</p> <ol style="list-style-type: none">1. Bit rate of the user data at the application layer.2. If User Charging is Event based then Delivery Verification is required3. Delivery Verification relates only to verification itself. Quality assessments may be required in addition.4. DRM may be applicable to User Charging.5. For GERAN lower bandwidth availability may constrain some applications. In such cases it may be possible to provide the same content via different delivery methods.6. The ' - ' mark indicates that no applicable information has been identified.						

End of changes