Technical Specification Group Services and System Aspects   ***TSGS#12(01)0255***
Meeting #12, Stockholm, Sweden, 18-21 June 2001

Source:	**SA1**	
Title:	**CRs to 22.101 Rel-4 and Rel-5 on Addition of a Streaming paragraph**	
Document for:	**Approval**	
Agenda Item:	**7.1.3**	

Spec	CR	Rev	Phase	Cat	Subject	Version-Current	Version-New	Doc-2nd-Level
22.101	074		Rel-4	F	Addition of a Streaming paragraph	4.3.0	4.4.0	S1-010576
22.101	075		Rel-5	A	Addition of a Streaming paragraph	5.2.0	5.3.0	S1-010577

3GPP TSG-SA1 Meeting #12
Helsinki, Finland, 7-11 March 2001

Tdoc DocNumber S1-010576

CR-Form-v3

CHANGE REQUEST

⌘   **TS22.101** CR   **074**   ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘   (U)SIM☐   ME/UE X   Radio Access Network ☐   Core Network X

Title:	⌘	Addition of a Streaming paragraph
Source:	⌘	SA1
Work item code: ⌘	PSTREAM (Streaming (SA4))	***Date:*** ⌘ 11/05/01
Category: ⌘ **F**		***Release:*** ⌘ REL-4

	Use one of the following categories:	*Use one of the following releases:*
	F *(essential 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	*REL-4* *(Release 4)*
	be found in 3GPP TR 21.900.	*REL-5* *(Release 5)*

Reason for change:	⌘	SA4 have been working on streaming for the past year and it has been pointed out that there is no stage 1 requirements to cover this work.
Summary of change:	⌘	Addition of references to the streaming specifications and an additional paragraph outlining the requirements for streaming.
Consequences if not approved:	⌘	SA4 continue to work without any stage 1 requirements.

Clauses affected:	⌘	2.1, 6.2

Other specs Affected:	⌘ ☐	Other core specifications	⌘
	☐	Test specifications	
	☐	O&M Specifications	
Other comments:	⌘		

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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.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

2.1 Normative References

[1]   3GPP TS 22.105 "Services and Service Capabilities"

[2]   3GPP TS 22.121: "Virtual Home Environment (VHE), Stage 1"

[3]   3GPP TS 22.038: "SIM application toolkit, stage 1"

[4]   3GPP TS 22.001: " Principles of Circuit telecommunication services supported by a Public Land Mobile Network (PLMN)".

[5]   3GPP TS 22.004: General on supplementary services"

[6]   3GPP TS 22.030: "Man-Machine Interface (MMI) of the User Equipment (UE)"

[7]   3GPP TS 22.066: "Support of Mobile Number Portability (MNP); Service description; Stage 1"

[8]   3GPP TS 22.079: " Support of Optimal Routing; Stage 1"

[9]   3GPP TS 22.129: "Handover Requiremen3GPP TS between UM3GPP TS and GSM or other Radio Systems"

[10]   3GPP TS 33.102: "Security Architecture"

[11]   3GPP TS 22.011: "Service Accessibility"

[12]   3GPP TS 22.016: "International mobile Station Equipment Identities (IMEI)"

[13]   24.008: " Mobile Radio Interface Layer 3 Specification"

[14]   3GPP TS 22.003: "Circuit Teleservices supported by a Public Land Mobile Network (PLMN)"

[15]   3GPP TS 21.133: "Security Threa3GPP TS and Requirements"

[16]   3GPP TS 33.120: "Security Principles"

[17]   3GPP TS 22.042: "Network Identity and Time Zone, Service Description, Stage 1"

[18]   GSM 02.09: "Digital cellular telecommunications system (Phase 2+); Security Aspects"

[19]   3GPP TS 31.102: "USIM Application Characteristics"

[20]   3GPP TS 22.121: "Architectural Requiremen3GPP TS for Release 99"

[21]   3GPP TS 22.002: "Circuit Bearer Services (BS) supported by a Public Land Mobile Network (PLMN)"

[22]   3GPP TS 22.060: "General Packet Radio Service (GPRS)"

[23]   3GPP 3GPP TS 29.002: "Mobile Application Part (MAP) specification "

[24]   TR 23.972: "Circuit Switched Multimedia Telephony".

[25]   3GPP TS 22.140: "Multimedia messaging service; Stage 1".

[26]   3GPP TS 22.226: "Global Text Telephony, Stage 1."

[27]   3GPP TS 26.233: "Packet Switched Streaming Service (PSS) ; General Description"

[28]   3GPP TS 26.234: "Packet Switched Streaming Service (PSS) ; Protocols and Codecs"

6 Principles for new service capabilities

6.1 General

3GPP specifications shall enable the user of a single terminal to establish and maintain several connections simultaneously. It shall efficiently cater for applications which have variable requiremen3GPP TS relating to specific QoS parameters (e.g. throughput) whilst meeting other QoS targets. It shall also cater for applications which are able to take adapt to a range of variations in QoS.

6.2 Multimedia

3GPP specifications shall support development of multimedia services and provide the necessary capabilities.

Multimedia services combine two or more media componen3GPP TS (e.g. voice, audio, data, video, pictures) within one call. A multimedia service may involve several parties and connections (different parties may provide different media components) and therefore flexibility is required in order to add and delete both resources and parties.

Multimedia services are typically classified as interactive or distribution services.

Interactive services are typically subdivided into conversational, messaging and retrieval services:

Conversational services are real time (no store and forward), usually bi-directional where low end to end delays (< 100 ms) and a high degree of synchronisation between media componen3GPP TS (implying low delay variation) are required. Video telephony and video conferencing are typical conversational services."

Messaging services offer user to user communication via store and forward uni3GPP TS (mailbox or message handling devices). Messaging services might typically provide combined voice and text, audio and high-resolution images.

Retrieval services enable a user to retrieve information stored in one or many information centres. The start at which an information sequence is sent by an information centre to the user is under control of the user. Each information centre accessed may provide a different media component, e.g. high resolution images, audio and general archival information.

Distribution services are typically subdivided into those providing user presentation control and those without user presentation control.

Distribution services without user control are broadcast services where information is supplied by a central source and where the user can access the flow of information without any ability to control the start or order of presentation e.g. television or audio broadcast services.

Distribution services with user control are broadcast services where information is broadcast as a repetitive sequence and the ability to access sequence numbering allocated to frames of information enables the user (or the user's terminal) to control the start and order of presentation of information.

6.2.1 Circuit Switched (CS) multimedia calls

The following basic requiremen3GPP TS are be supported for CS multimedia [24]:

CS multimedia shall be based on a 3GPP specific subset of H.324M.

All call scenarios shall be supported, i.e. Mobile Originating and Mobile Terminating call against Mobile, ISDN and PSTN call party.

Single and multiple numbering schemes shall be supported.

Speech fallback to 3GPP TS 11 [14] shall be supported, i.e. if setup of the multimedia call fails the call will be set up as a speech call. At release '99 only fallback case supported is from '3.1kHz Ext. PLMN' to speech.

CS Multimedia call is a Bearer Service, which utilises Synchronous Transparent Data service.

Different bitrates as specified at 22.002 [21] shall be supported.

Supplementary services apply to multimedia calls as for Synchronous Transparent Data service according to 22.004[5].

6.2.2 Multimedia Messaging Service (MMS)

The following basic requiremen3GPP TS are be supported for MMS:

Store-and-forward multimedia messaging service with mobile and non-mobile users [25].

MMS shall be capable of supporting integration of different types of messaging (e.g. fax, SMS, Multimedia, voicemail, e-mail etc.) in a consistent manner.

Streamed and batch delivery for both message download from the network to the terminal, and messages upload from the terminal to the network.

6.2.3 Text Conversation

Global Text Telephony (GTT) is a feature that enables real-time text conversation [28].

- GTT enables real time, character by character, text conversation to be included in any conversational service, Circuit Switched as well as IP based.

- It is possible to use the text component in a session together with other media components, especially video and voice.

- Interworking with existing text telephony in PSTN as well as emerging forms of standardised text conversation in all networks is within the scope of this feature.

- The text media component can be included initially in the session, or added at any stage during the session.

- The text component is intended for human input and reading, and therefore suppor3GPP TS human capabilities in text input speed. The character set support is suitable for the languages the users communicate in.

- GTT specifies limited interoperation with Multimedia Messaging Services including a possibility to divert to messaging in case of call failure and sharing user interface equipment and external UE interfaces.

6.2.4 Packet Switched Streaming Service

The following basic requirements are to be supported for streaming :

- The streaming service uses a client / server model which is transparent to the PLMN. The client controls the initiation and execution of the service.

- The streaming service [27] shall use existing standards (codecs and protocols [28]) where these are available.

- The streaming service utilises the PS Domain with the QoS requirements as specified in TS 22.105 [1].

6.3 Service Management Requirements

3GPP specifications shall include standardised protocols enabling service management. It shall enable control, creation and subscription of service capabilities and services, and the management of user profiles.

3GPP TSG-SA1 Meeting #12
Helsinki, Finland, 7-11 March 2001

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CHANGE REQUEST

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Source: ⌘	SA1	
Work item code: ⌘	PSTREAM (Streaming (SA4))	***Date:*** ⌘ 11/05/01
Category: ⌘ **A**		***Release:*** ⌘ REL-5

Use <u>one</u> of the following categories: **F** *(essential 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 <u>one</u> 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)*

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- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

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[26]   3GPP TS 22.226: "Global Text Telephony, Stage 1."

[27]   3GPP TS 22.IM: "IP multimedia (IM) CN subsystem, stage 1"

[28]   RFC2543: "SIP: Session Initiation Protocol"

[29]   3GPP TS 26.233: "Packet Switched Streaming Service (PSS) ; General Description"

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7.2.2　IP multimedia (IM) sessions

IP multimedia services are not the evolution of the circuit switched services but represent a new category of services, mobile terminals, services capabilities, and user expectations. Any new multimedia service, which may have a similar name or functionality to a comparable standardised service, does not necessarily have to have the same look and feel from the user's perspective of the standardised service. Voice communications (IP telephony) is one example of real-time service that would be provided as an IP multimedia application.

The following basic requirements are be supported for IP multimedia [27]:

- IP multimedia session control shall be based on SIP [28].

- All session scenarios shall be supported, i.e. Mobile Originating and Mobile Terminating sessions against Internet/Intranet, CS or IM Mobile, ISDN, PSTN call party.

- MSISDN and SIP URL numbering and addressing schemes shall be supported.

- IP multimedia applications shall as a principle, not be standardised, allowing service provider specific variations.

7.2.3　Multimedia Messaging Service (MMS)

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- Store-and-forward multimedia messaging service with mobile and non-mobile users [25].

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7.3   Service Management Requirements

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