Technical Specification Group Services and System Aspects ***TSGS#12(01)0331***

Meeting #12, Stockholm, Sweden, 18-21 June 2001

Source: **TSG SA WG2**
Title: **CRs on 23.107**
Agenda Item: **7.2.3**

The following Change Requests (CRs) have been approved by TSG SA WG2 and are requested to be approved by TSG SA plenary #12.
Note: the source of all these CRs is now S2, even if the name of the originating company(ies) is still reflected on the cover page of all the attached CRs.

CR#	*re*	*Rel*	*title*	*cat*	*in*	*out*	*S2#*	*WI*
047	3	R4	Mitigation of bandwidth consumption attacks	D	4.1.0	4.2.0	S2-011452	QoS
048	3	R5	Mitigation of bandwidth consumption attacks	A	5.1.0	5.2.0	S2-011453	QoS

3GPP TSG-SA2 QoS Drafting Meeting
Antwerp, Belgium, 17h-19th of April~~March~~ 2001

Tdoc S2-0114520961

CR-Form-v3

CHANGE REQUEST

⌘	23.107	CR	047	⌘	rev	R3 2	⌘	Current version:	4.0.0	⌘

*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 ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Mitigation of bandwidth consumption attacks
Source:	⌘	Motorola, ATT
Work item code:	⌘	QoS
Date:	⌘	2001-04-19
Category:	⌘	**D**
Release:	⌘	REL-4

Use one 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 one 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)*

Reason for change:	⌘	TS 21.133 V3.1.0 discusses UMTS network vulnerabilities that may arise from the delivery of new services. Many of these services may come from sources that are accessed via the Internet. This contribution proposed text enhancement to mitigation of bandwidth consumption attacks at the GGSN
Summary of change:	⌘	
Consequences if not approved:	⌘	

Clauses affected:	⌘	Section 6.2.2.2		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

6.2.2.2 QoS management functions for the UMTS bearer service in the user plane

The QoS management functions of the UMTS BS for the user plane are shown in figure 3. These functions maintain the data transfer characteristics according to the commitments established by the UMTS BS control functions and expressed by the bearer service attributes. The QoS management user plane functions are provided with the relevant attributes by the QoS management control functions.

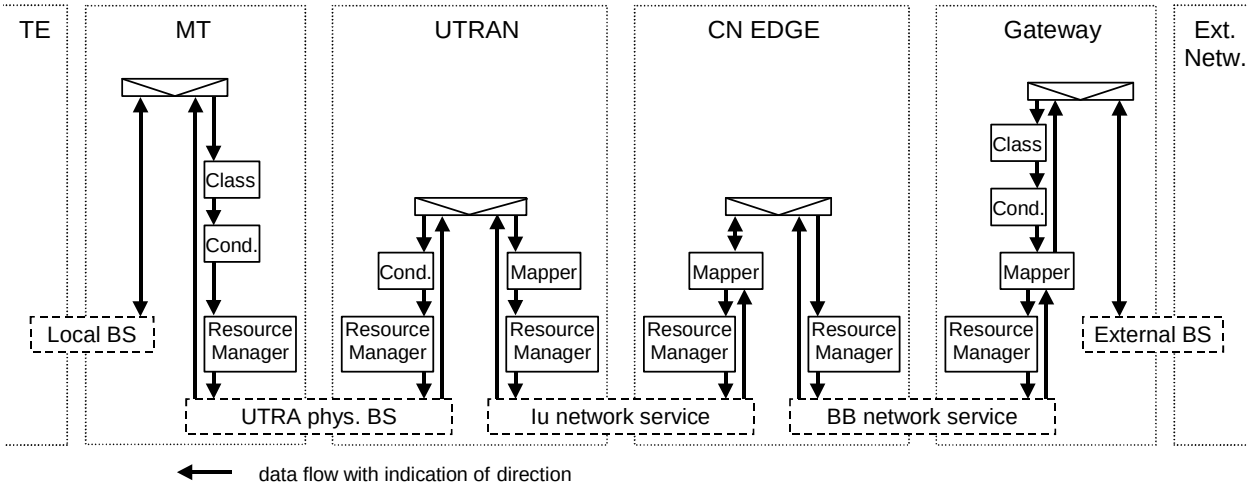

Figure 3: QoS management functions for the UMTS bearer service in the user plane

The classification function (Class.) in the Gateway and in the MT assign user data units received from the external bearer service or the local bearer service to the appropriate UMTS bearer service according to the QoS requirements of each user data unit. The classification function in the MT is FFS.

The traffic conditioner (Cond.) in the MT provides conformance of the uplink user data traffic with the QoS attributes of the relevant UMTS bearer service. In the Gateway a traffic conditioner may provide conformance of the downlink user data traffic with the QoS attributes of the relevant UMTS bearer service; i.e., on a per PDP context basis. The packet oriented transport of the downlink data units from the external bearer service to the UTRAN and the buffering in the UTRAN may result in bursts of downlink data units not conformant with the UMTS BS QoS attributes. A traffic conditioner in the UTRAN forms this downlink data unit traffic according to the relevant QoS attributes.

The traffic conditioners are not necessarily separated functions. For example a resource manager may also provide conformance with the relevant QoS attributes by appropriate data unit scheduling. Or, if fixed resources are dedicated to one bearer service the resource limitations implicitly condition the traffic.

The mapping function marks each data unit with the specific QoS indication related to the bearer service performing the transfer of the data unit.

Each of the resource managers of a network entity is responsible for a specific resource. The resource manager distributes its resources between all bearer services requesting transfer of data units on these resources. Thereby, the resource manager attempts to provide the QoS attributes required for each individual bearer service.

3GPP TSG-SA2 QoS Drafting Meeting
Antwerp, Belgium, 17h-19th of April~~March~~ 2001

Tdoc S2-0114530962

CR-Form-v3

CHANGE REQUEST

⌘ **23.107** **CR** **048** ⌘ rev **R3** ⌘ Current version: **5.0.0** ⌘

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Title:	⌘	Mitigation of bandwidth consumption attacks
Source:	⌘	Motorola, ATT
Work item code:	⌘	QoS
Date:	⌘	2001-04-19
Category:	⌘	**D**
Release:	⌘	REL-5

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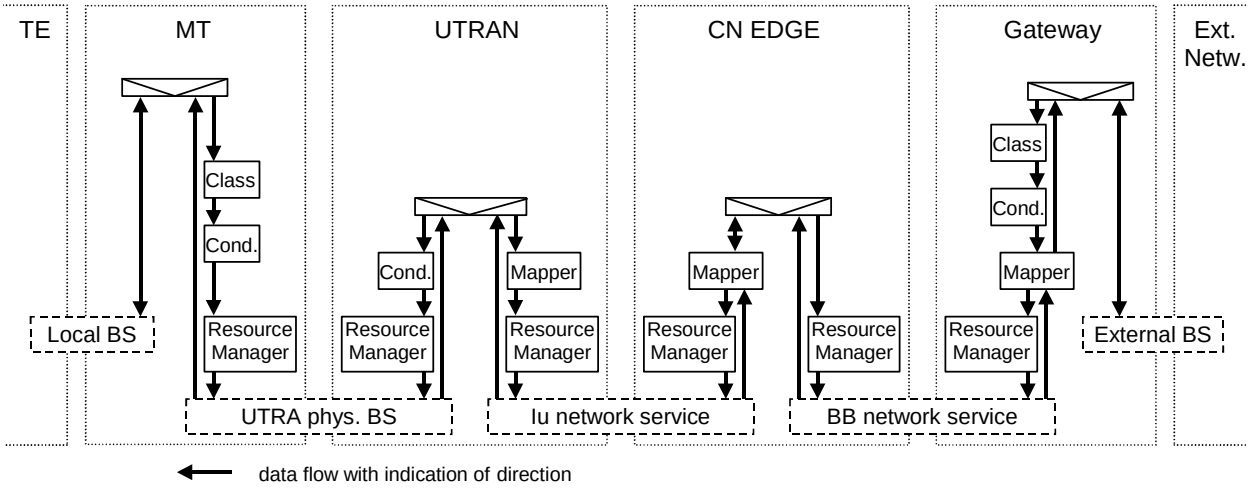

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