Technical Specification Group Services and System Aspects **TSGS#19(03)0119**

Meeting #19, Birmingham, U.K., 17~20 March 2003

Source: **TSG SA WG2**
Title: **CRs on 23.207**
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 #19.
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.

Tdoc #	Title	Spec	CR #	cat	Version in	REL	WI	S2 meeting
S2-030857	Removal of editors notes	23.207	55	F	5.6.0	5	E2EQoS	S2-30

3GPP TSG-SA2 Meeting #30
Milan, Italy, 24-28 February 2003

Tdoc ⌘S2-030857

CR-Form-v7

CHANGE REQUEST

⌘ **23.207** **CR** **55** ⌘**rev** **-** ⌘ Current version: **5.6.0** ⌘

*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 **X**

Title:	⌘	Removal of editors notes
Source:	⌘	Ericsson
Work item code:	⌘	E2EQoS
Date:	⌘	18/02/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(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)
Rel-6 (Release 6)

Reason for change:	⌘	Editors notes in TS 23.207 are no longer correct or relevant.
Summary of change:	⌘	Remove editors notes.
Consequences if not approved:	⌘	Incorrect/inaccurate editors notes remain.

Clauses affected:	⌘	?

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	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/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.

First amended section

5.1.2.1 QoS management functions for end-to-end IP QoS

The QoS management functions for controlling the external IP bearer services and how they relate to the UMTS bearer service QoS management functions are shown in Figure 2.

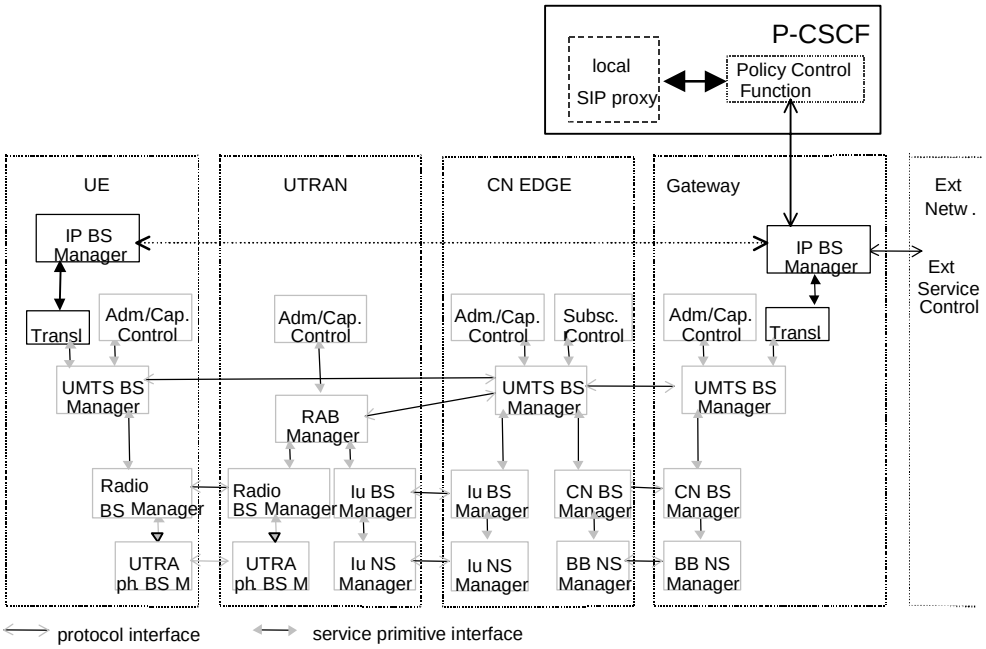

Figure 2: QoS management functions for UMTS bearer service in the control plane and QoS management functions for end-to-end IP QoS

NOTE: The dimmed boxes in Figure 2 are clarified in TS23.107.

NOTE: The following will be revisited in the Release 6 timeframe: - the possible reuse of the protocols in the Go interface between the GGSN and other application servers, and possible interfaces between the PDF and the P-CSCF, and between the PDF and other application servers.

Note: The UE is only shown as a combined element, but it may also consist of a split TE/MT. Standardization of the interface and operation within a split UE is outside the scope of this TS.

~~[Editor's note: Figure 2 and this chapter shows UE only as a combined element. This TS also need to consider the case where the TE and MT are split. A section providing the split and the distribution of functionality need to be added to this TS and is for further study. Standardization of the interface between the TE and MT is the responsibility of the 3GPP working group TSG T2, and is outside the scope of this TS.]~~

Next amended section

5.2.1 GGSN

This clause provides functional descriptions of capabilities in GGSN. The capabilities are part of IP BS Manager (see 5.1.1.1) or corresponding user plane functions. Determination of exactly which functions are required to support interoperator and multi-vendor aspects are not addressed in this clause.

The **DiffServ Edge Function** shall be compliant to the IETF specifications for Differentiated Services [6]. The IETF Differentiated Services architecture will be used to provide QoS for the external bearer service.

Parameters for the Diffserv Edge Function (i.e. classifiers, meters, packet handling actions) may be statically configured on the GGSN, derived from PDP Context parameters and/or derived from RSVP signalling.

Diffserv functions configured on the basis of PDP Context parameters consist of marking user packets. The DSCP to be used is derived from the PDP Context parameters according to statically configured rules.

Statically configured Diffserv functions may include classifiers, meters, markers, droppers and shapers acting on uplink traffic.

~~**RSVP/IntServ Function**~~

~~[Editor's note: Detailed functional description of RSVP/IntServ Function is FFS]~~

The **Service-based Local Policy Enforcement Point** controls the quality of service that is provided to a combined set of IP flows. The policy enforcement function includes policy-based admission control that is applied to the bearer associated with the flows, and configuration of the policy based "gating" functionality in the user plane. Service-based local policy decisions are either "pushed" to or requested by the GGSN via the Go interface.

Policy-based admission control ensures that the resources that can be used by a particular set of IP flows are within the "authorized resources" specified via the Go interface. The authorized resources provide an upper bound on the resources that can be reserved or allocated for the set of IP flows. The authorized resources are expressed as a maximum authorised bandwidth and QoS class. ~~The QoS class identifies a bearer service (which has a set of bearer service characteristics associated with it). The PDF generates a maximum authorized QoS class for the set of IP flows.~~ The QoS class identifies a bearer service (which has a set of bearer service characteristics associated with it). The PDF generates a maximum authorized QoS class for the set of IP flows. This information is mapped by the **Translation/mapping function** in the GGSN to give the authorized resources for UMTS bearer admission control.

In the user plane, policy enforcement is defined in terms of a "gate" implemented in the GGSN. A gate is a policy enforcement function that interacts through Go interface with PCF as the Policy Decision Point for QoS resource authorisation at the IP BS level for a unidirectional flow of packets. Gate operations as defined in TS23.228 are to control and manage media flows based on policy, and are under the control of PCF. A gate operates on a unidirectional flow of packets, i.e., in either the upstream or downstream direction. A gate consists of a packet classifier, and a gate status (open/closed). When a gate is open, the packets in a flow are accepted, and are thus subject to the Diffserv edge treatment. When a gate is closed, all of the packets in the flow are dropped.

The gate shall be applied to the PDP contexts where SBLP applies, and for such PDP contexts the information received in the TFT is ignored. In the downlink direction, packets are processed against each gate in turn until a match is found. If a match is not found, packet processing shall then continue against filters installed from UE supplied TFTs for PDP contexts where SBLP is not applied according to specification TS 23.060.

In the uplink direction, packets received on a PDP context with SBLP based filters shall be matched against those filters. If a match is found, the packet shall be passed if the gate associated with that filter is open processed according to the gate functions. If the gate is closed, or if the packet does not match any of the packet filters, the packet shall be silently discarded.

The packet classifier associated with a gate is a micro-flow classifier including the standard 5-tuple: (source IP address, destination IP address, source port, destination port, protocol), identifying a set of packets associated with a unidirectional flow.

Elements of the 5-tuple that cannot be derived from the SDP according to a set of rules shall be wild-carded.

The **Binding Mechanism Handling** associates the PDP context bearer with one or more IP flows in order to support service-based local policy enforcement. Binding information is included in PDP Context Activation or Modification messages to associate the PDP context bearer with SBLP policy decision information provided by the PCF associated with the IP flow(s). In order to allow SBLP policy information to be "pulled" from the PCF, the binding information shall allow the GGSN to determine the address of the PCF to be used.

When binding information is received, the GGSN shall ignore any UE supplied TFT, and the filters in that TFT shall not be installed in the packet processing table. When sending the binding information to the network, the Ue shall populate the TFT filters with wildcard values..

Next amended section

A.2 Scenarios

~~[Editor's NOTE: the precedence and sequence of the different phases of session / bearer establishment need further study.]~~

These scenarios give examples of concatenating QoS mechanisms in different parts of the network which together can deliver an end-to-end QoS. These scenarios are not intended to describe the details of the interworking between the QoS mechanisms.

The different scenarios involve cases with and without service based local policy. Each scenario describes the applicable cases, possibly by referencing another scenario. In some scenarios, only one of the cases may be valid (e.g. scenario 5). Where both cases are covered, they may be described together identifying the optionality, or separately for clarity of the individual cases.

The optional authorisation token is associated with the cases involving service based local policy, and is applicable for IM services. It is an operator decision whether or not to support service based local policy for IM services. If service based local policy is not supported, or not applicable (i.e. not IM service), then the optional authorisation token and application server at the P-CSCF are not used.

IM services not using service based local policy will typically follow scenarios 1 to 4. IM services using service based local policy will typically follow scenarios 3 to 5.

NOTE: Scenario 5 is reserved for the IP multimedia services involving, e.g., SIP signalling , IP policy control, and subscription checking.