_____

**Source:** **TSG SA WG2 (S2-042944)**
**Title:** **New WID on Evolution of Policy Control and Charging**
**Agenda Item:** **7.2.3**

_____

# Work Item Description

**Title: Evolution of Policy Control and Charging**

## 1        3GPP Work Area

|   |   |
|---|---|
|   | Radio Access |
| X | Core Network |
|   | Services |

## 2        Linked work items

> *32016 ñ QoS improvements (QoS1)*
> *32030 ñ Overall architecture aspects of IP flow based bearer level charging (CH)*

## 3        Justification

During the course of Release 6 standards development some new features have been introduced to provide advanced core network capabilities for packet-based services:
- Enhanced policy control allows the operator to perform service based QoS policy control for their session-based PS applications;
- Flow-based charging allows more granularity for end-user charging, accounting and online credit control

While some level of convergence between these functions has already been achieved in Rel6, a full harmonization of these functions remains to be worked on. Such harmonization is essential when optimizing realtime interactions of the GGSN (and gateways of other IP Connectivity Access Networks), and optimizing the realtime control architecture of GPRS in general.
A further aspect that remains to be studied is how differentiation based on end-user subscription classes can be achieved. In addition it should be studied how non-QoS policy control functions (e.g. service authorization, control of redirect functions etc.) fits in the harmonised architecture. These aspects are important in order to fully capitalize on the new core network capabilites described above.

## 4        Objective

The objective of this work item is to study the following items:

1) Complete harmonization and merger of the policy control and flow based charging architecture and procedures.
2) Possible architectures and solutions for adding end-user subscription differentiation and general policy control aspects to the policy- and charging control.
3) Alternative solutions for binding bearers to services (provided today by the authorization token). This includes studying solutions for the network to control bearer usage by service flows.

The progress on the objectives above is worth tracking separately in the Work Plan, hence it is proposed that these objectives each form a Buiding Block within the Feature.
Once the study has reached conclusions on these objectives, it is expected that standardization work will commence to include the solutions to specifications under further work items.

**5        Service Aspects**

Service aspects of user subscriptions are to be taken into account.

**6        MMI-Aspects**

None.

**7        Charging Aspects**

One aspects of the work item is to study how IP flow based charging can be merged with SBLP, and how it can utilize end-user subscription information.

**8        Security Aspects**

None.

**9        Impacts**

| Affects: | UICC apps | ME | AN | CN | Others |
|---|---|---|---|---|---|
| **Yes** | | X | | X | |
| **No** | X | | X | | X |
| **Don't know** | | | | | |

**10        Expected Output and Time scale (to be updated at each plenary)**

| New specifications | | | | | | |
|---|---|---|---|---|---|---|
| Spec No. | Title | Prime rsp. WG | 2ndary rsp. WG(s) | Presented for information at plenary# | Approved at plenary# | Comments |
| 23.8xx | Evolution of Policy Control and Charging | SA2 | | SA#28 (June/05) | SA#29 (Sept/05) | |
| | | | | | | |

| Affected existing specifications | | | | | |
|---|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| | | Effected specs may be identified once conclusions have been reached on the objectives described above | SA#30 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**11        Work item raporteurs**
Balazs Bertenyi (Nokia)

**12        Work item leadership**

SA 2

**13          Supporting Companies**

Nokia, Ericsson, Nortel, Siemens, Huawei, Lucent

**14          Classification of the WI (if known)**

| | |
|---|---|
| X | Feature (go to 14a) |
| X | Building Block (go to 14b) |
|   | Work Task (go to 14c) |

14a     The WI is a Feature: List of building blocks under this feature

1)      Merger of the policy control (SBLP) and flow based charging (FBC) architecture and procedures.
2)      Subscription aspects of policy and charging control.
3)      Solutions for the network to control bearer usage by service flows.

14b     The WI is a Building Block: parent Feature

(one Work Item identified as a feature)

14c     The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)