Technical Specification Group Services and System Aspects
Meeting #27, 14 - 17 March 2005,
Tokyo, Japan

TSGS#27(05)0012

3GPP TSG-SA WG2 Meeting #44. **Tdoc S2-050478**
Budapest, Hungary. 26th Jan. - 2nd Feb. 2005.

Title: **LS on removal of Ry reference point**
Response to: **-**
Release: **Rel 6**
Work Item: **CH-FBC**

Source: **TSG_SA WG2.**
To: **SA, CN3**
Cc:

Contact Person:
Name: Krister Boman
Tel. Number: +46 31 747 4055
E-mail Address: krister.boman@ericsson.com

Attachments: S2-050477

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1. Overall Description:

SA2 has discussed and conditionally approved the attached CR S2-050477 and asks CN3 to analyse the implications from a CN3 point of view if any. In particular CN3 is guided to study whether the approval of the attached CR would lead to stage 3 implementation problems from a Release 6 point of view.

SA2 would also like to inform CN3 that the release 7 PCC WI might develop the Ry reference point.

2. Actions:

To SA and CN3 group.

ACTION: SA2 kindly asks CN3 group to analyse the attached CR if there are any stage-3 implementation problems for release 6.

SA2 kindly asks SA group to consider the analysis from CN3 group related to the attached CR S2-050477 for approval at SA plenary meeting in March 2005.

3. Date of Next SA2 Meetings:

SA2 #45	4th - 8th April 2005	Beijing, China.
SA2 #46	9th - 13th May 2005	Athens, Greece.

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Tdoc ⌘S2-050477

CR-Form-v7.1

CHANGE REQUEST

⌘ **23.125** **CR** **118** ⌘ **rev** **2** ⌘ Current version: **6.3.0** ⌘

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

Proposed change affects: | UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Removal of the Ry reference point
Source:	⌘	Ericsson
Work item code:	⌘	CH-FBC
Date:	⌘	01/02/2005
Category:	⌘	**F**
Release:	⌘	Rel-6

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:
Ph2 *(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)*
Rel-7 *(Release 7)*

Reason for change:	⌘	The 23.125 does not pose any specific requirements for the Ry reference point, but expects that it is identical to the Rx.
Summary of change:	⌘	All references to the Ry reference point are removed. It is added that the OCS may act as an AF with a CRF.
Consequences if not approved:	⌘	The Ry reference point is an alias for the Rx reference point, serving no other purpose.

Clauses affected:	⌘	6.1.1, 6.2.2, 6.3.5, 7.1, 7.1a

Other specs Affected:	Y	N		
⌘		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.

****** 1st modified section ******

6.1.1 Online service data flow based bearer charging architecture

Figure 6.1 below presents the overall architecture for service data flow based online bearer charging.

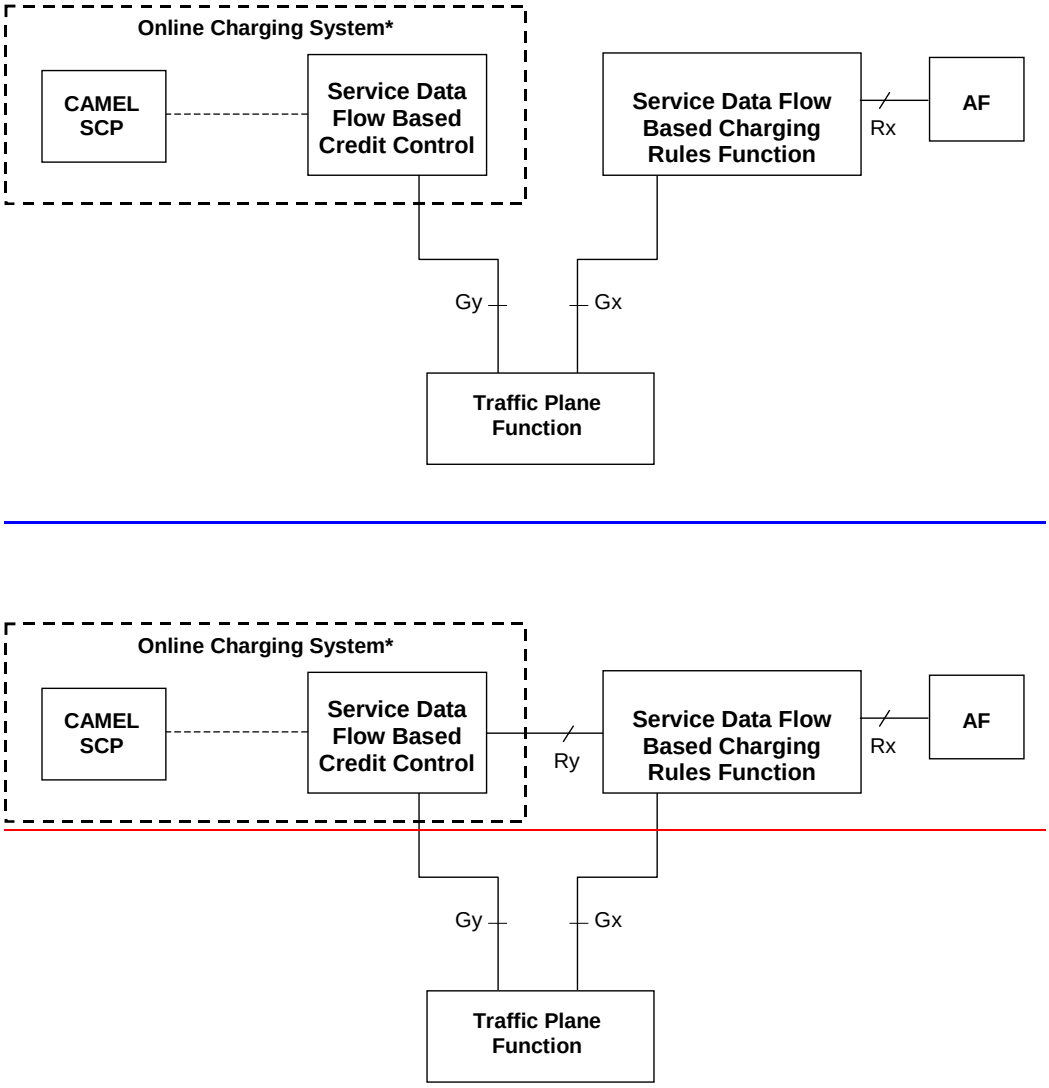


Figure 6.1: Overall architecture for service data flow based online bearer charging

Note(*): The detailed functional entities of the Online Charging System are not shown in this figure. The details of the OCS are specified in [3].
The CAMEL-SCP depicted on the figure above performs the functions as defined in [8].

Note: The OCS may interact as an AF with a CRF

****** 2nd modified section ******

6.2.2 Service Data Flow Based Credit Control Function

The Service Data Flow Based Credit Control Function performs online credit control functions together with the Online Charging System. It provides a new function within the Online Charging System.

The Online Charging System is specified in 3GPP TS 32.200 [3]. The Service Data Flow Based Credit Control Function is considered as a new functional entity for release 6 within the Online Charging System.

The OCS may interact as an AF with a CRF to provide input to the CRF for charging rules selection.

~~The OCS can interact with the CRF, by using the Ry interface. This allows the OCS to provide input to the CRF for charging rules selection.~~

There may be several OCSs in a PLMN. To allow for this case, OCS addresses (i.e. the primary address and secondary address) may be passed once per IP network connection from the CRF to the TPF. This information shall be locally pre-configured within the TPF for all users. The addresses provided by the CRF have higher priority than the pre-configured ones.

****** 3rd modified section ******

~~6.3.5 Ry reference point~~

~~The Ry reference point enables transport of information (e.g. charging rules selection information) from the OCS to the CRF. The functionality supported over the Ry reference point should be the same as for the Rx reference point and a common interface specification is expected.~~

7 Message Flows

7.1 AF input to provision of charging rules

The AF may provide the CRF with application/service data flow charging information as described in 6.2.5. This information is used by the CRF to determine and complete the appropriate charging rules to send to the TPF. It is an AF decision when to send this information and the CRF takes the AF input into account from the point that it receives the AF information. The AF input may trigger an unsolicited provision of charging rules by the CRF as described in 7.3.

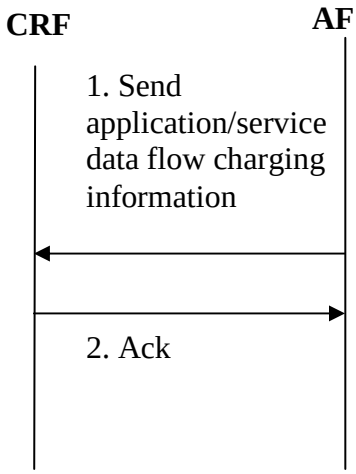
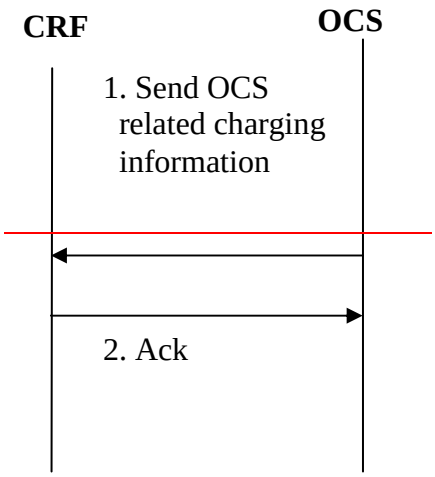


Figure 7.0a: AF input to provision of charging rules

1. The AF sends application/service data flow charging information. The AF may include IMSI/MSISDN in addition to the IP Address of the UE

2. If the AF only provides the IP Address of the UE the CRF acknowledges the AF input. If the AF in addition to the IP Address of the UE also provides the IMSI/MSISDN the CRF performs, based on the operator configuration, a check of the UE identities provided by the AF against the UE identities provided by the TPF. After the identity matching procedures the CRF informs the AF about the result. For GPRS the CRF receives the IMSI and MSISDN from the TPF at bearer establishment.

~~7.1a OCS input to provision of charging rulesThe OCS may provide the CRF with OCS related charging information. It is an OCS decision when to send this information and the CRF takes the OCS input into account from the point that it receives the OCS information. The OCS input may trigger an unsolicited provision of charging rules by the CRF as described in 7.3.~~



~~**Figure 7.0b: OCS input to provision of charging rules**~~

~~1. The OCS sends OCS related charging information~~

~~2. The CRF acknowledges the OCS input.~~

****** End of document ******