

3GPP TSG\_CN / SMG3  
Plenary Meeting #7, Madrid, Spain  
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**Source:** CN WG2  
**Title:** LS from N2A  
**Agenda item:** 5.2.1  
**Document for:** Information

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<b>TDoc #</b>	<b>To</b>	<b>CC</b>	<b>Title</b>	<b>Conclusion</b>
N2A000250	SA5	SA1	LS to Charging impact due to introduction of CAMEL Phase 3	Agreed
N2A000299	SA1		LS on In-band user Interaction handling for dialled service	Agreed

## Liaison Statement

**Date:** 21 February, 2000

**From:** 3GPP-CN2

**To:** 3GPP-SA5

**CC:** 3GPP-SA1

**Subject:** Charging impact due to introduction of CAMEL Phase 3<sup>1</sup>

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1. This document is a liaison statement and is not a 3GPP specification. It is intended to provide information on the impact on the charging mechanism due to the introduction of CAMEL Phase 3 in GSM GPRS. The charging mechanism is described in the 3GPP specification 23.107. The charging mechanism is described in the 3GPP specification 23.107. The charging mechanism is described in the 3GPP specification 23.107.

# 1 Charging Requirements due to enhancements to circuit switched call handling

## 1.1 Enhancement of the Furnish Charging Information

In CAMEL Phase 3, the following enhancements, compared to CAMEL Phase 2, are specified for the Furnish Charging Information (FCI) operation.

### Increase of the amount of free format data

#### Append Mechanism for FCI

The free format data fields provided in the CDRs shall not be overwritten by the free format data already present in the CDR.

Since a gsmSSF may produce partial CDRs during a call, the CDR that contains the free format data, should have an *append indicator*.

When a CDR contains the *append indicator*, the free format data in that CDR shall not overwrite the free format data in previous CDR's of that call configuration.

When a CDR does not contain the *append indicator*, the free format data in that CDR shall overwrite the free format data in previous CDR's of that call configuration.

## 1.2 Introduction of Subscribed Dialed Services

In CAMEL Phase 3, a CAMEL Service may be invoked at DP Analyzed Info (subscribed dialed services). The following scenarios can be distinguished:

- invocation in the MSC, for Mobile Originated calls
- invocation in the MSC, for Mobile Forwarded calls (voice call forwarding or CAMEL call forwarding) or Call Deflection
- invocation in the GMSC, for Mobile Forwarded calls (voice call forwarding or CAMEL call forwarding)

In CAMEL Phase 3, the MSC, for Mobile Forwarding of Voice Call Forwarding CDRs (based on FCI) (based on CAMEL) and/or Forwarding of call deflection CDRs (based on CAMEL) shall contain the amount of charging data and appending vs. overwriting of charging data.

- expansion of the existing CDR's, with additional fields to contain the information specific to the subscribed dialed services
- definition of additional CDR's, specifically for the subscribed dialed services

## 1.3 Introduction of Unsuccessful call set up Services

In CAMEL Phase 3, a CAMEL Service may be invoked at DP Blocked call setup, DP L-Ring and DP L-No Answer. CAMEL specific data may have to be placed in the appropriate CDR. The same mechanism as for subscribed dialed services, can be followed to fulfil the above requirement.

## 1.4 Introduction of Network based Dialed Services

In CAMEL Phase 3, network based services may be invoked at DP Analyzed Info (network based dialed services). These network based services may be invoked in the same call scenarios as the subscribed dialed services, in the VMSC and GMSC. The same mechanism as for subscribed dialed services and unsuccessful call set up services, can be followed to fulfil the above requirement.

## 2 Charging Requirements due to the introduction of CAMEL control of MO-SMS

In CAMEL phase 2, the charging data for MO-SMS is controlled by the gsmSCF. The charging data for MO-SMS is controlled by the gsmSCF or gsmSCF are the same as for circuit switched calls (i.e. amount of charging data and appending vs. overwriting of charging data).

- Service Key
- gsmSCF Address
- Default SMS Handling

### 3 Charging Requirements due to the introduction of CAMEL control of GPRS

In CAMEL Phase 3, CAMEL Service Control for GPRS (GPRS) introduces the concept of charging rules for sending charging data to the gsmSCF or gprsSCF (ie. amount of charging data and appending vs. overwriting of charging data).

- Service Key
- gsmSCF Address
- Default GPRS handling

**To: SA WG1**

**CC:**

**Source: TSG CN WG2 Subgroup A**

**Title: LS on In-band user Interaction handling for Dialed Service<sup>1</sup>**

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TSG CN WG2 Subgroup A is looking at the stage2 and work for in-band user interaction handling for Dialed service and is planning to include this capability in R99. TSG CN WG2 Subgroup A kindly asks SA WG1 to confirm the following assumption from the service requirement viewpoint and update the relevant stage 1 document (22.078), if necessary. The current assumption in CN WG2 Subgroup A is that it shall be possible for the CSE to order the playing of announcement/guidance or tones towards the calling subscriber without on-line charging procedure. (Apply Charging or Send Charging Information) It means that CSE for dialed service can not give any charging instruction for that user interaction, and the on-line charging is not applicable during that user interaction.