TSGS#23(04)0135

Source: SA5 (Telecom Management)

Title: Rel-6 CR 32.403 Iu connection release

Document for: Decision

Agenda Item: 7.5.3

Doc-1st-Level	Spec	CR	R	Phase	Subject	Cat	Vers.	Doc-2nd-L	Workitem
SP-040135	32.403	029	-	Rel-6	Add the measurements about Iu connection release	B	6.2.0	S5-048191	OAM-PM

CR-Form-v7

CHANGE REQUEST

⌘ 32.403 CR 029 ⌘rev - ⌘ Current version: 6.2.0 ⌘

*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 [X] Core Network ☐

Title:	⌘	Add the measurements about Iu connection release
Source:	⌘	**SA5** (llrui@bupt.edu.cn, liyewen@chinamobile.com)
Work item code:	⌘	OAM-PM
Date:	⌘	27/02/2004
Category:	⌘	**B**
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:

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:	⌘	Currently, the measurements about Iu connection release are not involved in 32.403. But these measurements are necessary for the operator to analyse the reasons for release, especially for the abnormal release, e.g. call drop.
Summary of change:	⌘	Add the measurements about Iu connection release.
Consequences if not approved:	⌘	

Clauses affected:	⌘	3.1, New 4.14

	Y	N		
Other specs affected:		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	

Change in Clause 3.1

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

"*(n-1)* out of *n*" approach:

- The measurements result values generated by a NE can be obtained in a number of different ways. Therefore, the "*(n-1)* out of *n* approach" has been defined in order to avoid redundancy in the measurements.
- The "*(n-1)* out of *n* approach" allows a vendor to choose any (n-1) out of the n defined counters for implementation but some choices can offer more detailed information than others. The missing n^{th} value can be calculated in post-processing.
- If multiple measurements are included in one template, then the applicability of the "(n-1) out of n" scenario are mentioned in template item A with the following sentence "The *n* measurement types defined in item E are subject to the "*(n-1)* out of *n* approach"". The item D will specify the measurement result per measurement type specified in template item E.
- If the measurements that are applicable to the "*(n-1)* out of *n*" scenario are defined in separate templates, then they will be grouped together into a common clause of the TS, and the applicability of the approach will be mentioned in the clause that groups the measurements.
- Examples of measurements which are subject to the "*(n-1)* out of *n*" approach are provided in the annex A.

Measurement community

Several measurement communities are defined in the present document to identify the end users of system measurements. Each measurement should be defined to address the needs of at least one of these user communities.

Six communities have been identified so far:

Network Operator's Business Community

Network Operator's Maintenance Community

Network Operator's Traffic Engineering Community

Network Operator's Customer Care Community

Equipment Vendor's Performance Modelling Community

Equipment Vendor's Development Engineering Community

A comprehensive description of measurement communities is provided in Annex B. The user communities names are a composite of the various terms used in the industry and might be subject to modification or refinement in future releases.

Measurement family

The measurement names defined in the present document are all beginning with a prefix containing the measurement family name (e.g. RAB.AttEstabCS.Conv, MM.AttGprsAttach). This family name identifies all measurements which relate to a given functionality and it may be used for measurement administration (see TS 32.401 [12]).

The list of families currently used in the present document is as follows:

- CAM (measurements related to CAMEL)
- GTP (measurements related to GTP)
- HHO (measurements related to Hard Handover)
- IRATHO (measurements related to inter-Radio Access Technology Handover)
- ISYSC (measurements related to GSM/UMTS Intersystem changes)

- IU (measurements related to Iu connection)
- MM (measurements related to Mobility Management)
- MMS (measurements related to Multimedia Messaging Services)
- RAB (measurements related to Radio Access Bearer management)
- RELOC (measurements related to SRNS Relocation)
- RLC (measurements related to Radio Link Control)
- RRC (measurements related to Radio Resource Control)
- SEC (measurements related to Security)
- SHO (measurements related to Soft Handover)
- SIG (measurements related to Signalling)
- SM (measurements related to Session Management)
- SMS (measurements related to Short Message Service)
- SUB (measurements related to Subscriber Management)
- UBS (measurements related to UMTS Bearer Service)

End of Change in Clause 3.1

Change in Clause 4.14

4.14 Iu connection release

4.14.1 Overview

4.14.1.1 Considered Iu connection release procedures

Performance Measurement definitions in this subclause are based on the TS 25.423 "UTRAN Iu interface RANAP Signalling" document [5].

The following paragraphs are of interest for this purpose:

- Iu Release Request;
- Iu Release;
- IU RELEASE REQUEST;
- IU RELEASE COMMAND;
- IU RELEASE COMPLETE;

These paragraphs show in particular the following diagrams:

Figure: Iu Release Request procedure. Successful operation.

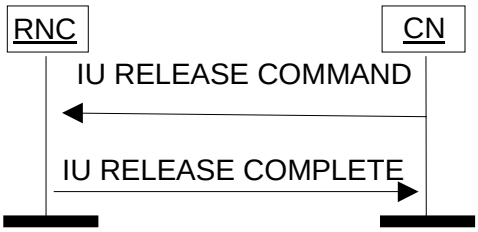

Figure: Iu Release procedure. Successful operation.

4.14.2 Iu connection release request by UTRAN

4.14.2.1 Attempted Iu connection release request by UTRAN for CS domain

a) This measurement provides the number of attempted requests by UTRAN to release an Iu connection between the RNC and a CS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Transmission of a RANAP message IU RELEASE REQUEST by the RNC to the CS CN. Each RANAP message IU RELEASE REQUEST sent to the CS CN is added to the relevant per cause measurement. The possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE REQUEST attempts. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the *.sum* suffix.

e) The measurement name has the form IU.AttConnRelReqUTRANCS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for circuit switched traffic.

h) UMTS.

4.14.2.2 Attempted Iu connection release request by UTRAN for PS domain

a) This measurement provides the number of attempted requests by UTRAN to release an Iu connection between the RNC and a PS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Transmission of a RANAP message IU RELEASE REQUEST by the RNC to the PS CN. Each RANAP message IU RELEASE REQUEST sent to the PS CN is added to the relevant per cause measurement. The possible release causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE REQUEST attempts. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the .*sum* suffix.

e) The measurement name has the form IU.AttConnRelReqUTRANPS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for packet switched traffic.

h) UMTS.

4.14.3 Iu connection release by CN

4.14.3.1 Attempted Iu connection release by CN for CS domain

a) This measurement provides the number of attempted release by a CS CN to an Iu connection between the RNC and a CS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Receipt of a RANAP message IU RELEASE COMMAND sent by the CS CN to the RNC. Each RANAP message IU RELEASE COMMAND received from the CS CN is added to the relevant per cause measurement. The possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE COMMAND attempts. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the .*sum* suffix.

e) The measurement name has the form IU.AttConnRelCNCS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for circuit switching.

h) UMTS.

4.14.3.2 Attempted Iu connection release by CN for PS domain

a) This measurement provides the number of attempted release by a PS CN to an Iu connection between the RNC and a PS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Receipt of a RANAP message IU RELEASE COMMAND sent by the PS CN to the RNC. Each RANAP message IU RELEASE COMMAND received from the PS CN is added to the relevant per cause measurement. The possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE COMMAND attempts. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the .*sum* suffix.

e) The measurement name has the form IU.AttConnRelCNPS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for packet switching.

h) UMTS.

4.14.3.3 Successful Iu connection release by CN for CS domain

a) This measurement provides the number of successful release by a CS CN to an Iu connection between the RNC and a CS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Transmission of a RANAP message IU RELEASE COMPLETE by the RNC to the CS CN. Each RANAP message IU RELEASE COMPLETE sent to the CS CN is added to the relevant per cause measurement. The possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE COMPLETE. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the .*sum* suffix.

e) The measurement name has the form IU.SuccConnRelCNCS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for circuit switching.

h) UMTS.

4.14.3.4 Successful Iu connection release by CN for PS domain

a) This measurement provides the number of successful release by a PS CN to an Iu connection between the RNC and a PS CN. The measurement is split into subcounters per release cause.

b) CC.

c) Transmission of a RANAP message IU RELEASE COMPLETE by the RNC to the PS CN. Each RANAP message IU RELEASE COMPLETE sent to the PS CN is added to the relevant per cause measurement. The possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of IU RELEASE COMPLETE. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the .*sum* suffix.

e) The measurement name has the form IU.SuccConnRelCNPS.*Cause*
where *Cause* identifies the release cause.

f) RncFunction.

g) Valid for packet switching.

h) UMTS.

End of Change in Clause 4.14
End of Document