

3G CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.401 CR 11

Current Version: **3.0.0**

3G specification number ↑

↑ CR number as allocated by 3G support team

For submission to **TSG-RAN#6** for approval (only one box should
list TSG meeting no. here ↑ for information be marked with an X)

Form: 3G CR cover sheet, version 1.0 The latest version of this form is available from: <http://ftp.3gpp.org/Information/3GCRF-xx.rtf>

Proposed change affects: USIM ME UTRAN Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 27 Oct 1999

Subject: Change on U- and C-RNTI definitions

3G Work item:

Category: F Correction
A Corresponds to a correction in a 2G specification
(only one category shall be marked with an X) B Addition of feature
C Functional modification of feature
D Editorial modification

Reason for change:

- Following LS received from R2 (Tdoc R399-e46), c-RNTI has been changed from "Controlling RNC RNTI" to "Cell RNTI".
- Based on agreement on R399-e54, u-RNTI has also been added to the definitions

Clauses affected: § 6.5.1

Other specs affected:

Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
Other 2G core specifications	<input type="checkbox"/>	→ List of CRs:	
MS test specifications	<input type="checkbox"/>	→ List of CRs:	
BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:

6.1.5 UE Identifiers

Radio Network Temporary Identities (RNTI) are used as UE identifiers within UTRAN and in signalling messages between UE and UTRAN.

~~Three~~ Four types of RNTI exist;

- 1) Serving RNC RNTI (s-RNTI)
- 2) Drift RNC RNTI (d-RNTI)
- 3) ~~Controlling RNC Cell~~ RNTI (c-RNTI)
- 4) UTRAN RNTI (u-RNTI)

s-RNTI is used

- by UE to identify itself to the Serving RNC
- by SRNC to address the UE
- by DRNC to identify the UE to Serving RNC.

s-RNTI is allocated for all UEs having a RRC connection, it is allocated by the Serving RNC and it is unique within the Serving RNC. s-RNTI is reallocated always when the Serving RNC for the RRC connection is changed.

d-RNTI is used

- by serving RNC to identify the UE to Drift RNC.

NOTE: The d-RNTI is never used on Uu.

d-RNTI is allocated by drift RNC upon drift UE contexts establishment and it shall be unique within the drift RNC. Serving RNC shall know the mapping between s-RNTI and the d-RNTIs allocated in Drift RNCs for the same UE. Drift RNC shall know the s-RNTI and SRNC-ID related to existing d-RNTI within the drift RNC.

c-RNTI is used

- by UE to identify itself to the controlling RNC
- by controlling RNC to address the UE.

c-RNTI is allocated by controlling RNC upon UE accessing a new cell. C-RNTI shall be unique within the accessed cell. Controlling RNC shall know the d-RNTI associated to the c-RNTI within the same logical RNC (if any).

u-RNTI

The u-RNTI is allocated to an UE having a RRC connection and identifies the UE within UTRAN.

u-RNTI is composed of

- SRNC identity
- s-RNTI

Each RNC has a unique identifier within the UTRAN part of the PLMN, denoted by RNC identifier (RNC-ID). This identifier is used to route UTRAN interface messages to correct RNC. RNC-ID of the serving RNC together with the s-RNTI is a unique identifier of the UE in the UTRAN part of the PLMN.

6.1.5.1 Usage of RNTI

S-RNTI together with the RNC-ID is used as a UE identifier for the first cell access (at cell change) when a RRC connection exists for this UE and for UTRAN originated paging including associated response messages on the air interface. RNC-ID is used by Controlling RNC to route the received uplink messages towards the Serving RNC.

NOTE: For the initial access two different methods of identification, a random number and a unique core network UE identifier are under consideration.

C-RNTI is used as a UE identifier in all other DCCH/DTCH common channel messages on air interface.