

Technical Specification Group Radio Access Network
Marco Island, USA 4 - 7 June 2002

RP#16(02) 0399

TSG_Doc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	New_Ver_Num	Tdoc_Num	WorkItem
RP-020399	25.401	049		R99	New UE identifier for Shared Channel handling for TDD	F	3.9.0	3.10.0	R3-021187	TEI
RP-020399	25.401	050		Rel-4	New UE identifier for Shared Channel handling for TDD	A	4.3.0	4.4.0	R3-021188	TEI
RP-020399	25.401	051		Rel-5	New UE identifier for Shared Channel handling for TDD	A	5.2.0	5.3.0	R3-021189	TEI

CHANGE REQUEST

⌘ **25.401 CR 049** ⌘ rev ⌘ Current version: **3.9.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ New UE identifier for Shared Channel handling for TDD DSCH/USCH		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ May 2002
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ DSCH RNTI is a new identifier for DSCH MAC-c/sh multiplexing which was approved for FDD in CR043 at last RAN meeting. Although TDD does not have this particular MAC problem it does have a similar problem in that the RRC signalling used on the SHCCH to allocate DSCH and USCH needs this same unique identity. It is therefore proposed to use the new identifier for the purpose of TDD DSCH/USCH signalling. The new DSCH-RNTI identifier is 2-octet long. It is allocated by the CRNC and is passed along to the SRNC within the RADIO LINK SETUP RESPONSE and RADIO LINK RECONFIGURATION READY messages. This proposal aligns TDD to the already approved changes in 25.331.
Summary of change:	⌘ Modification of the new identifier DSCH-RNTI in section 6.1.7 so that it applies to both FDD and TDD.
Consequences if not approved:	⌘ The same problem that was identified and fixed in FDD will not be fixed in TDD. In addition the use of the new identity would be misaligned between WG2 and WG3. <u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because it affects implementations supporting the corrected functionality, i.e. TDD DSCH/USCH setup and establishment.

Clauses affected: ⌘ 6.1.7

Other specs	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ TS 25.401 v4.3.0 CR050 TS 25.401 v5.2.0 CR051 TS 25.423 v3.9.0 CR609 TS 25.423 v4.4.0 CR610 TS 25.423 v5.0.0 CR611
affected:	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	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/3G_Specs/CRs.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.
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- 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.

6.1.7 UE Identifiers

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

Four types of RNTI exist:

- 1) Serving RNC RNTI (s-RNTI);
- 2) Drift RNC RNTI (d-RNTI);
- 3) Cell RNTI (c-RNTI);
- 4) UTRAN RNTI (u-RNTI);
- ~~{FDD--} 5) DSCH RNTI (DSCH-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.

~~{FDD--} DSCH-RNTI is used:~~

- by controlling RNC to address the UE on the DSCH ~~[TDD- and USCH]~~.

DSCH-RNTI is allocated by controlling RNC upon UE establishing a DSCH ~~[TDD - or USCH]~~ channel. DSCH-RNTI shall be unique within the cell carrying the DSCH ~~[TDD - and/or USCH]~~. ~~{FDD - DSCH-RNTI is used as UE identifier in the MAC-c/sh header over DSCH. It and is used only in the downlink.}[TDD - DSCH-RNTI is~~

used as UE identifier in RRC messages concerning DSCH and USCH allocations and is used in both the downlink and uplink].

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.

CHANGE REQUEST

⌘ **25.401 CR 050** ⌘ rev ⌘ Current version: **4.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ New UE identifier for Shared Channel handling for TDD DSCH/USCH		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ May 2002
Category:	⌘ A	Release:	⌘ REL-4
	<i>Use one of the following categories:</i> F (essential 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.		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ DSCH RNTI is a new identifier for DSCH MAC-c/sh multiplexing which was approved for FDD in CR043 at last RAN meeting. Although TDD does not have this particular MAC problem it does have a similar problem in that the RRC signalling used on the SHCCH to allocate DSCH and USCH needs this same unique identity. It is therefore proposed to use the new identifier for the purpose of TDD DSCH/USCH signalling. The new DSCH-RNTI identifier is 2-octet long. It is allocated by the CRNC and is passed along to the SRNC within the RADIO LINK SETUP RESPONSE and RADIO LINK RECONFIGURATION READY messages. This proposal aligns TDD to the already approved changes in 25.331.
Summary of change:	⌘ Modification of the new identifier DSCH-RNTI in section 6.1.7 so that it applies to both FDD and TDD.
Consequences if not approved:	⌘ The same problem that was identified and fixed in FDD will not be fixed in TDD. In addition the use of the new identity would be misaligned between WG2 and WG3. <u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because it affects implementations supporting the corrected functionality, i.e. TDD DSCH/USCH setup and establishment.

Clauses affected: ⌘ 6.1.7

Other specs	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ TS 25.401 v3.9.0 CR049 TS 25.401 v5.2.0 CR051 TS 25.423 v3.9.0 CR608 TS 25.423 v4.4.0 CR609 TS 25.423 v5.0.0 CR610
affected:	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘		

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- ~~{FDD-}~~5) DSCH RNTI (DSCH-RNTI);

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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:

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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;
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DSCH-RNTI is allocated by controlling RNC upon UE establishing a DSCH [TDD - or USCH] channel. DSCH-RNTI shall be unique within the cell carrying the DSCH [TDD – and/or USCH]. ~~{FDD - DSCH-RNTI is used as UE identifier in the MAC-c/sh header over DSCH. It is used only in the downlink.}~~ [TDD – DSCH-RNTI is used

as UE identifier in RRC messages concerning DSCH and USCH allocations and is used in both the downlink and uplink].

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.

CHANGE REQUEST

⌘ **25.401 CR 051** ⌘ rev ⌘ Current version: **5.2.0** ⌘

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Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ New UE identifier for Shared Channel handling for TDD DSCH/USCH		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ May 2002
Category:	⌘ A	Release:	⌘ REL-5
	<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

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