TSG-RAN Working Group 2 (Radio layer 2 and Radio layer 3) *TSGR2#6(99)750*
Sophia Antipolis, 16th to 20th August 1999

Agenda Item: 14.4

Source: Samsung Electronics

Title: Change Request to 25.331 for the clarification of control only substate.

Document for: Discussion and Decision

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1. Introduction

The current RRC messages just have an ability to change the state of physical channel or transport channel. However, the state transitions between user data active substate(UDAS) and control only substate(COS) require a capability to change logical channel status [2]. In order to satisfy this requirement, we suggest to define a new information element for logical channel, "DTCH status"

Since this information element should be included in the messages that make state transition between COS and UDAS, we have to analyse which message is relevant to this state transition. Fortunately, Samsung already showed the relevant messages in a previous contribution [1] and the discussion result was the following.

- Active Set Update message.
- RRC connection setup message.
- RAB setup/release/reconfiguration message.
- Transport channel reconfiguration message.

2. Change request chapter 10 of TS 25.331

10.1.1.1 ACTIVE SET UPDATE

<Functional description of this message to be included here>

RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UTRAN $\rightarrow$ UE

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE information elements	Activation time		O		
LogCH Information elements	DTCH status		O		
Phy CH information elements	Primary CCPCH info		M	Note 1	For each radio link to add
	Downlink DPCH info		M		
	Primary CCPCH info		M	Note 1	For each radio link to delete
	SSDT indicator		O		

Note 1: If it is assumed that primary CCPCH downlink scrambling code is allways allocated with sufficient reuse distances, primary CCPCH downlink scrambling code will be enough for designating the different radiolinks.

10.1.4.7 RRC CONNECTION SETUP

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE information elements	Initial UE identity		M	FFS whether conveyed on RRC or MAC.	
	S-RNTI		M		
	SRNC identity		M		
	C-RNTI		O	Only if assigned to a common transport channel	
	Activation time		O		
RAB information elements	RAB identity		M	Indicates the signalling link	
	Signalling link type		M		
	RAB multiplexing info		M	For the signalling link	
LogCH information elements	DTCH status		O		
TrCH information elements	TFCS		O	Uplink TFCS	
	TFCS		O	Downlink TFCS	
	TFC subset		O		
	Transport channel identity		M	For each new transport channel	Uplink transport channels
	TFS		M		
	Transport channel identity		M	For each new transport channel	Downlink transport channels
	TFS		M		
PhyCH information elements	Frequency info		O		
	Uplink DPCH power control info		O		
	Uplink DPCH info		O	Maximum one of these	Uplink radio resources
	PRACH info		O		
	Uplink timeslot info		O		
	Primary CCPCH info		O	For each radio link	Downlink radio resources
	Downlink DPCH info		O		
	Secondary CCPCH info		O		
	Downlink timeslot info		O	Note 1	
	SSDT indicator		O	Necessity is FFS	
	Gated Transmission Control info		O	FFS	

10.1.5.3 RADIO ACCESS BEARER RECONFIGURATION

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE Information elements	Activation time		O		
	C-RNTI			Only RACH/FACH	
RAB information elements	RAB identity		M		For each RAB affected by this message
	RLC info		O	FFS	
	RAB multiplexing info		M		
LogCH information elements	DTCH status		O		
TrCH information elements	TFCS		O	for uplink DCHs	
	TFCS		O	for downlink DCHs	
	TFC subset		O	for DCHs in uplink	
	Transport channel identity		O	For each removed transport channel	Uplink transport channels
	Transport channel identity		O	For each reconfigured or added transport channel	
	TFS		O		
	Dynamic Control		O	For each reconfigured or added transport channel controlled by DRAC	
	Transmission time validity		O		

	Time duration before retry		O		
	Silent period duration before release		O		
	Transport channel identity		O	For each removed transport channel	Downlink transport channels
	Tranpsort channel identity		O	For each reconfigured or added transport channel	
	TFS		O		
PhyCH information elements	Uplink DPCH power control info		O		
	Frequency info		O		
	Uplink DPCH info		O	Maximum one of these	Uplink radio resources
	PRACH info		O		
	Uplink timeslot info		O		
	Primary CCPCH info		O	For each radio link	Downlink radio resources
	Downlink DPCH info		O		
	Secondary CCPCH info		O		
	Downlink timeslot info		O	Note 1	
	SSDT indicator		O	Necessity is FFS	
	Gated Transmission Control info		O	FFS	

10.1.5.5 RADIO ACCESS BEARER RELEASE

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE Information elements	Activation time		O		
	C-RNTI		O	Only RACH/FACH	
RAB information elements	RAB identity		M	For each released RAB	
	RAB identity		O	For each other RAB affected by this message	
	RAB multiplexing info		O		
LogCH information elements	DTCH status		O		
TrCH information elements	TFCS		O	for uplink DCHs	
	TFCS		O	for downlink DCHs	
	TFC subset		O	for DCHs in uplink	
	Transport channel identity		O	For each removed transport channel	Uplink transport channels
	Transport channel identity		O	For each reconfigured or added (FFS) transport channel	
	TFS		O		
	Dynamic Control		O	For each reconfigured or added (FFS) transport channel, controlled by DRAC	
	Transmission time validity		O		
	Time duration before retry		O		
	Silent period duration before release		O		
	Transport channel identity		O	For each removed transport channel	Downlink transport channels
	Transport channel identity		O	For each reconfigured or added transport channel	
	TFS		O		
PhyCH information elements	Uplink DPCH power control info		O		
	Frequency info		O		
	Uplink DPCH info		O	Maximum one of these	Uplink radio resources
	PRACH info		O		
	Uplink timeslot info		O		
	Primary CCPCH info		O	For each radio link	Downlink radio resources
	Downlink DPCH info		O		
	Secondary CCPCH info		O		
	Downlink timeslot info		O	Note 1	

10.1.5.7 RADIO ACCESS BEARER SETUP

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
CN information elements	NAS binding info		M	Transparent non access stratum info e.g. bearer identity.	
UE Information elements	Activation time		O		
	C-RNTI		O	Only RACH/FACH	
RAB information elements	RAB identity		M	For the new RAB	
	RLC info		M		
	RAB multiplexing info		M		
	RAB identity		O	For each other RAB affected by this message	
	RAB multiplexing info		O		
LogCH information elements	DTCH status		O		
TrCH information elements	TFCS		O	for uplink DCHs	
	TFCS		O	for downlink DCHs	
	TFC subset		O	for DCHs in uplink	
	Transport channel identity		O	For each removed transport channel	Uplink transport channels
	Transport channel identity		O	For each reconfigured or added transport channel	
	TFS		O		
	Dynamic Control		O	For each reconfigured or added transport channel, controlled by DRAC	
	Transmission time validity		O		
	Time duration before retry		O		
	Silent period duration before release		O		
	Transport channel identity		O	For each removed (FFS) transport channel	Downlink transport channels
	Transport channel identity		O	For each reconfigured or added transport channel	
	TFS		O		
PhyCH information elements	Uplink DPCH power control info		O		
	Frequency info		O		
	Uplink DPCH info		O	Maximum one of these	Uplink radio resources
	PRACH info		O		
	Uplink timeslot info		O		
	Primary CCPCH info		O	For each radio link	Downlink radio resources
	Downlink DPCH info		O		

	Secondary CCPCH info		O		
	Downlink timeslot info		O	Note 1	
	SSDT indicator		O	Necessity is FFS	
	Gated Transmission Control info		O	FFS	

10.1.5.9 TRANSPORT CHANNEL RECONFIGURATION

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE Information elements	Activation time		O		
	C-RNTI		O	Only RACH/FACH	
	Control-only-state-timer		O	FFS	
LogCH information elements	DTCH status		O		
TrCH information elements	TFCS		O	for uplink DCHs	
	TFCS		O	for downlink DCHs	
	TFC subset		O	for DCHs in uplink	
	Transport channel identity		O	For each re-configured transport channel	Uplink transport channels
	TFS		O		
	Dynamic Control		O	For each re-configured transport channel, controlled by DRAC	
	Transmission time validity		O		
	Time duration before retry		O		
	Silent period duration before release		O		
	Transport channel identity		O	For each re-configured transport channel	Downlink transport channels
	TFS		O		
PhyCH information elements	Uplink DPCH power control info		O		
	Frequency info		O		
	Uplink DPCH info		O	Maximum one of these	Uplink radio resources
	PRACH info		O		
	Uplink timeslot info		O		
	Primary CCPCH info		O	For each radio link	Downlink radio resources
	Downlink DPCH info		O		
	Secondary CCPCH info		O		
	Downlink timeslot info		O	Note 1	
	SSDT indicator		O	Necessity is FFS	
	Gated Transmission Control info		O	FFS	

10.2.X Logical CH Information elements

10.2.X.1 DTCH status

Indicates whether the using of logical channel DTCH is permitted.

3. References

[1] 3GPP RAN WG2 TSGR2-99626 “The RRC messages relevant to control only substate,” Samsung Electronics.

[2] TS RAN 25.303 v300 “UE Functions and Interlayer Procedures in Connected Mode”

[3] TS RAN 25.331 v110 “RRC Protocol Specification”