Agenda Item: 7.7.1

Source: Ericsson

Title: **RRC Message Contents**

Document for: Decision

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1   Introduction

This document describes the message content for the Radio access bearer control procedures Physical channel reconfiguration, Transport channel reconfiguration and Radio access bearer reconfiguration. Further the message content of RRC Connection request and RRC Connection setup procedures are described.
An explanation of all parameters is given in [2].

In the following tables O means that the parameter is optional and M that the parameter is mandatory.

2 RAB Control procedures

2.1 Physical Channel Reconfigure

This message is used by UTRAN to assign replace or release a set of physical channels used by a UE.

Logical channel: DCCH

Direction: UTRAN->UE

Parameter category	Information Element			Presence	Note	
Physical channel parameters	UL radio resources			O	Only needed if changing the UL radio resource	
		DPCH		O		Mandatory to have one of these, and maximum one of these parameters.
		PRACH		O		
		Time slot info		O	Only for TDD	
	DL radio resources			O	Only needed if changing the DL radio resource	
		Radio link info		O		
			DPCH	O		
			Secondary CCPCH	O	Only one RL can contain this parameter	
			Time slot info	O	Only for TDD	
UE Parameters	Activation time			O		

2.2 Physical Channel Reconfiguration Complete (FFS)

This message is sent from the UE when a physical channel reconfiguration has been done.

Logical channel: DCCH

Direction: UE->UTRAN

Parameter category	Information Element	Presence	Note

No Parameters Identified

2.3 Transport Channel Reconfiguration

This message is used by UTRAN to configure transport channel parameters for a UE. It can also change physical channel parameters.

Logical channel: DCCH

Direction: UTRAN->UE

Parameter category	Information Element			Presence	Note	
Transport channel parameters	Transport channel id			M		
	TFS			M		
	TFCS			M	Only for DCH	
	TFC subset			O	Only for DCH	
Physical channel parameters	UL radio resources			O	Only needed if changing the UL radio resource	
		DPCH		O		Maximum one of these is used
		PRACH		O		
		Time slot info		O	Only for TDD	
	DL radio resources			O	Only needed if changing the DL radio resource	
		Radio link info		O		
			DPCH	O		
			Secondary CCPCH	O	Only one RL can contain this parameter	
			Time slot info	O	Only for TDD	
UE Parameters	Activation time			O		

2.4 Transport Channel Reconfiguration Complete

This message is sent from the UE when a transport channel reconfiguration has been done.

Logical channel: DCCH

Direction: UE->UTRAN

Parameter category	Information Element	Presence	Note
Transport channel parameters	Transport channel id	M	To indicate what Transport channels has been reconfigured

2.5 Radio Access Bearer Reconfiguration

This message is sent from UTRAN to reconfigure parameters related to a change of QoS. It can also change the multiplexing in MAC, reconfigure transport channels and physical channels.

Logical channel: DCCH

Direction: UTRAN->UE

Parameter category	Information Element			Presence	Note	
Radio access bearer parameters	RAB id			M	Affected Radio access bearers	
	RLC parameters			FFS		
	RAB multiplexing info			M		
Transport channel parameters	Transport channel id			O		
	TFS			O		
	TFCS			O	Only for DCH	
	TFC subset			O	Only for DCH	
Physical channel parameters	UL radio resources			O	Only needed if changing the UL radio resource	
		DPCH		O		Maximum one of these is used
		PRACH		O		
		Time slot info		O	Only for TDD	
	DL radio resources			O	Only needed if changing the DL radio resource	
		Radio link info		O		
			DPCH	O		
			Secondary CCPCH	O	Only one RL can contain this parameter	
			Time slot info	O	Only for TDD	
UE Parameters	Activation time			O		

2.6 Radio Access Bearer Reconfiguration Complete

This message is sent from the UE when a RAB and signalling link reconfiguration has been done.

Logical channel: DCCH

Direction: UE->UTRAN

Parameter category	Information Element	Presence	Note
Radio access bearer parameters	RAB id	M	To indicate what RAB has been reconfigured
Transport channel parameters	Transport channel id	O	To indicate what Transport channels has been reconfigured

3 RRC Connection Establishment and Release Procedures

3.1 RRC Connection Request

This message is used for requesting the establishment of an RRC connection.

Logical channel: CCCH

Direction: UE->UTRAN

Parameter category	Information Element		Presence	Note
UE parameters	UE identity		M	Whether this is an RRC IE or contained in MAC header is FFS.
		Random UE identity	O	One of these is used. If both or only one if them is permitted is FFS.
		UE CN identity	O	
	Establishment cause		M	

3.2 RRC Connection Setup

This message is used by the network to accept the establishment of an RRC connection for an UE, including assignment of resources.

Logical channel: CCCH

Direction: UTRAN->UE

Parameter category	Information Element			Presence	Note	
UE parameters	UE identity			M	Whether this is an RRC IE or contained in MAC is FFS.	
		Random UE identity		O	One of these is used. If both or only one if them is permitted is FFS.	
		UE CN identity		O		
Radio access bearer parameters	RAB id			M	Indicating signalling link	
	RLC parameters			M		
	RAB multiplexing info			M		
Transport channel parameters	Transport channel id			M		
	TFS			M		
	TFCS			O	Only for DCH	
	TFC subset			O	Only for DCH	
	Active set			M		
Physical channel parameters	Frequency information			FFS		
	UL radio resources			O	Only needed if changing the UL radio resource	
		DPCH		O		Maximum one of these is used
		PRACH		O		
		Time slot info		O	Only for TDD	
	DL radio resources			O	Only needed if changing the DL radio resource	
		Radio link info		M	Whether one or several RL is permitted is FFS	
			DPCH	O		
			Secondary CCPCH	O		
			Time slot info	O	Only for TDD	

4   Proposal

It is proposed that the subsections 2.1-2.6 and 3.1-3.2 are included in chapter 10 of S2.31 TS RAN S2.31 V0.0.1, RRC protocol specification;
Source:.

5   References

[1] TS RAN S2.31 V0.0.1, RRC protocol specification;
     Source: Temporary editor (Motorola)

[2] Tdoc RAN WG2 143/98 RRC message parameters;
       Source: Ericsson