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TSG-RAN Working Group 2 (Radio L2 and Radio L3)
Sophia Antipolis, France, 13th - 17th November 2000

R2-002463

Source: TSG-RAN WG2

To: TSG-SA WG4, TSG-T, TSG-GERAN, TSG-RAN WG1

Title: LS on Default configurations

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TSG-RAN WG2 would like to inform TSG-SA WG4, TSG-T, TSG-GERAN and TSG-RAN WG1 about the progress of the work on the use of default configurations within TSG-RAN WG2, the approach proposed for specifying these configurations. Moreover TSG-RAN WG2 seeks guidance on a number of issues.

1. Introduction

TS 25.331 currently includes support for predefined configurations that are broadcast within UMTS and may be used upon inter RAT handover to UMTS. In addition, TSG-RAN WG2 is working on the introduction of default configurations, for which the values are hard coded/ specified in the standard.

TSG-RAN WG2 has discussed which default configurations a UE should support, depending on its capabilities. A list of default configurations reflecting the current working assumptions of TSG-RAN WG2 is included in R2-002460, which is attached. Comments on this list of default configurations are appreciated. Morover, specific questions are provided in the following.

After agreeing the list of default radio bearer configurations, the specifications need to be updated to support the use of default configurations. This may also affect specifications outside the scope of TSG-RAN WG2.

Furthermore, the detailed parameter values for each of the default configurations need to be agreed. Although for many of these parameters values are specified within 34.108, this does not apply for all. The parameters for which values not covered by 34.108 are indicated by means of a [Tbd] in the annex within R2-002460. For these parameter values, RAN-2 will work on the radio bearer parameters. However, guidance from RAN-WG1 on the outstanding transport channel and physical layer parameters is appreciated

2. Questions to TSG-SA WG4

1) The list of default configurations included in R2-002460 includes one configuration including all AMR modes as well as two configurations including a single AMR mode. TSG-RAN WG2 would like to know which single AMR mode configurions are preferred by TSG SA WG4 and if the proposed 3 configurations are satisfactory.

3. Questions to TSG-T

1) Besides two configurations including a single AMR mode, which are included in 34.108, the default configurations listed in R2-002460 includes a configuration including all AMR modes. TSG-RAN WG2 would like to know TSG-T's opinion on introducing this mode within 34.108.

4. Questions to TSG-RAN WG1

1) The annex in R2-002460 provides an overview of which parameters, not covered by 34.108, need to be determined. The radio bearer information parameters mainly concern the RLC configuration and which is well within the scope of TSG-RAN WG2. However, TSG-RAN WG2 would like to seek guidance from TSG-RAN WG1 concerning the transport channel (gain factor information, rate matching attribute and the DCH BLER quality target) and physical channel (DPCCH power offset, PC- preamble) parameters. TSG-RAN WG2 would like to know TSG-RAN WG1's opinion about the feasibility of agreeing default values for the indicated parameters.

3GPP TSG RAN WG2 #17 **Tdoc R2-002460**
13-17 November 2000
Sophia Antipolis, France

Source : **RAN 2**

Title: **Revised Report on discussion: Hard-coded pre-configurations**

Agenda Item:

Document for: **Discussion and decision**

1. Definitions

For this paper we used the following definitions :
Pre-configuration: A predefined configuration that may be used for handover which has been obtained either from UE ROM memory or downloaded to the UE via system information.
Hard pre-configuration: Configuration hard-coded in the UE.
Soft pre-configuration : Configuration downloaded in the UE.

2. Principle

The priority shall be put on hard pre-configurations for R99 GSM to UTRAN handovers.
Hard pre-configuration can be utilized at any time for Handover
The hard pre-configuration have to be defined both for FDD and TDD.

3. RABs to be considered for hard pre-configuration

The RABs considered for hard pre-configuration are based on the Table 6.10.2.3.1from 34.108.

RAB				Residual BER	Comment
Traffic class	**SSD**	**Max. rate, kbps**	**CS/PS**		
Stand alone		UL : 3.4 DL : 3.4	CS		Is 3.4 sufficient to configure the mobile, after the HO ?
Stand alone		UL : 13.6 DL : 13.6	CS		
Conversational	Speech	UL:4.75-12.2 DL:4.75-12.2	CS	$5x10^{-4}$, $1x10^{-3}$, $5x10^{-3}$	For this RAB, all AMR codecs should be supported
Conversational	Speech	UL : 12.2 : DL 12.2	CS	$5x10^{-4}$, $1x10^{-3}$, $5x10^{-3}$	These additional speech RABS are already defined in 34.108
Conversational	Speech	UL : ??DL : ??	CS	$5x10^{-4}$, $1x10^{-3}$, $5x10^{-3}$	
Conversational	Unknown	UL:64 DL:64	CS	$1x10^{-4}$ or $1x10^{-6}$	
Conversational	Unknown	UL:32 DL:32	CS	$1x10^{-4}$ or $1x10^{-6}$	
Conversational	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	
Streaming	Unknown	UL:14.4 DL:14.4	CS	$1x10^{-3}$	
Streaming	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	
Streaming	Unknown	UL:57.6 DL:57.6	CS	$1x10^{-3}$	
Interactive or Background	N/A	UL:64 DL:128	PS	$1x10^{-3}$ or $1x10^{-4}$	Required if pre-configurations are used within UTRAN
Interactive or Background	N/A	UL:64 DL:144	PS	$1x10^{-3}$ or $1x10^{-4}$	Required if pre-configurations are used within UTRAN
Interactive or Background	N/A	UL:64 DL:384	PS	$1x10^{-3}$ or $1x10^{-4}$	Required if pre-configurations are used within UTRAN

Some of these RABs are already in 34.108. For the new ones, they should be added in this specification.

One of the RAB shall support all AMR codecs, but other ones can be defined.

Question to S4 ; which AMR RAB should be pre-configured for TFO ?

Low bit rate RABs can be used by low rate UEs.

It was suggested that for the current release, the compressed mode shall not be considered for hard pre-configuration.

The UE sends its capabilities before the handover in GSM network. This information is sufficient for the network to know what pre-configuration the UE supports.

4. Open issues

1. *The introduction of hard pre-configuration raise the problem of the numbering of these pre-configurations. The Pre-configuration-identifier is already fixed as* ***<predefined radio configuration id>+<predefined configuration value tag>****. With the introduction of hard pre-configuration, we need to restructure this ID, to offer different numbering for soft and hard pre-configurations. A solution could be based on what is done in GERAN.*

RAN 2 : Signaling of pre-configuration will be handle during a e-mail discussion on RAN2 reflector. This could affect the identification and structure of pre-configurations.

2. All hard pre-configurations shall also be available for UMTS to UMTS handovers.
RAN2 : For the moment, pre-configurations can't be used for Handovers within UTRAN. However this potentiality will be studied.

A. Overview of default configuration parameters (Annex)

not covered by 34.108

This section provides an overview of the predefined configuratinon parameters for an example configuration from 34.108, namely combination 4 : 12.2 kpbs speech, single AMR mode + 3.4 kbps signalling, 3 SRBs.. The tables below list the parameter for the FDD case. The tables provide an overview of parameters for which the value is neither specified in 34.108 not arbitrary or obvious; these parameters are indicated as [Tbd].

1: RB information
1.1 SRB Information list
1.1.1 SRB1

Parameter	SRB-1
rb-Identity	Absent, default
rlc-InfoChoice	rlc-info
>ul-RLC-Mode	UM
>>discardMode	[Tbd]
>dl-RLC-Mode	UM
rb-MappingInfo	
>UL-LogicalChannelMappings	OneLogicalChannel
>>ul-TransportChannelType	Dch
>>>transportChannelIdentity	4
>>logicalChannelIdentity	1
>>mac-LogicalChannelPriority	[Tbd]
>>logicalChannelMaxLoss	Agreed to be removed (CR xx)
>DL-logicalChannelMappingList	
>>Mapping option 1	One mapping option
>>>dl-TransportChannelType	Dch
>>>>transportChannelIdentity	4
>>>logicalChannelIdentity	1

1.1.2: SRB2, SRB3
Note1 The proposal is to defer establishment of SRB4 until after completion of handover
Note 2 In case no parameter value is specified for SRB-3, the same (value) as specified for SRB-2 applies.

Parameter	SRB-2	SRB-3
rb-Identity	Absent, default	
rlc-InfoChoice	Rlc-info	
>ul-RLC-Mode	AM	
>>transmissionRLC-DiscardMode	[Tbd]	
>>>maxDat	[Tbd]	
>>transmissionWindowSize	[Tbd]	
>>timerRST	[Tbd]	
>>max-RST	[Tbd]	
>>pollingInfo		
>>>timerPollProhibit	[Tbd]	
>>>timerPoll	[Tbd]	
>>>poll-PU	[Tbd]	
>>>poll-SDU	[Tbd]	

>>>lastTransmissionPU-Poll	[Tbd]	
>>>lastRetransmissionPU-Poll	[Tbd]	
>>>pollWindow	[Tbd]	
>>>timerPollPeriodic	[Tbd]	
>dl-RLC-Mode	AM	
>>inSequenceDelivery	TRUE	
>>receivingWindowSize	[Tbd]	
>>dl-RLC-StatusInfo		
>>>timerStatusProhibit	[Tbd]	
>>>timerEPC	[Tbd]	
>>>missingPU-Indicator	[Tbd]	
>>>timerStatusPeriodic	[Tbd]	
rb-MappingInfo		
>UL-LogicalChannelMappings	OneLogicalChannel	
>>ul-TransportChannelType	Dch	
>>>transportChannelIdentity	4	
>>logicalChannelIdentity	2	3
>>mac-LogicalChannelPriority	[Tbd]	[Tbd]
>>logicalChannelMaxLoss	Agreed to be removed (CR xx)	
>DL-logicalChannelMappingList		
>>Mapping option 1	One mapping option	
>>>dl-TransportChannelType	Dch	
>>>>transportChannelIdentity	4	
>>>logicalChannelIdentity	2	3

1.2 RB list for RAB

Parameter	RB-5	RB-6	RB-7
rb-Identity	5	6	7
pdcp-info	Absent, not applicable		
rlc-Info			
>ul-RLC-Mode	TM		
>>transmissionRLC-DiscardMode	[Tbd]		
>>segmentationIndication	[Tbd]		
>dl-RLC-Mode	TM		
>>segmentationIndication	[Tbd]		
rb-MappingInfo			
>UL-LogicalChannelMappings	OneLogicalChannel		
>>ul-TransportChannelType	Dch		
>>>transportChannelIdentity	1	2	3
>>logicalChannelIdentity	Absent		
>>mac-LogicalChannelPriority	[Tbd]	[Tbd]	[Tbd]
>>logicalChannelMaxLoss	Agreed to be removed (CR xx)		
>DL-logicalChannelMappingList			
>>Mapping option 1	One mapping option		
>>>dl-TransportChannelType	Dch		
>>>>transportChannelIdentity	1	2	3
>>>logicalChannelIdentity	Absent		

2. TrCH information

2.1 Information common for all TrCH's

Parameter	Value
ul-CommonTransChInfo	
> tfc-Subset	Absent, not required
>ul-TFCS	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete

>>>ctfcSize	Ctfc6Bit
>>>>TFCS list	
>>>>>TFCS 1	
>>>>>>ctfc6	0
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
>>>>>TFCS 2	
>>>>>>ctfc6	1
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
>>>>>TFCS 3	
>>>>>>ctfc6	11
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
>>>>>TFCS 4	
>>>>>>ctfc6	12
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
>>>>>TFCS 5	
>>>>>>ctfc6	13
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
>>>>>TFCS 6	
>>>>>>ctfc6	25
>>>>>>gainFactorInformation	[Tbd]
>>>>>>powerOffsetPp-m	Absent, applicable only for RACH in FDD
dl-CommonTransChInfo	
>tfcs-SignallingMode	Same as UL

2.2 Information specific for each TrCH

Parameter	TrCH 1	TrCH 2	TrCH 3	TrCH 4
UL-AddReconfTransChInfoList				
>transportChannelIdentity	1	2	3	4
>transportFormatSet	DedicatedTrans ChTFS			
>>tti	20			40
>>>tf 0				
>>>>numberOfTransportBlocks	Zero			
>>>>rlc-Size	bitMode			
>>>>>sizeType	1: 81	1: 103	1: 60	2: part1= 2, part2= 4 (148)
>>>tf 1				
>>>>numberOfTransportBlocks	One			
>>>>rlc-Size	bitMode			
>>>>>sizeType	1: 81	1: 103	1: 60	2: part1= 2, part2= 4 (148)
>>>tf 2		Not applicable	Not applicable	Not applicable
>>>>numberOfTransportBlocks	Zero			
>>>>rlc-Size	bitMode			
>>>>>sizeType	1: 39			
>>semiStaticTF-Information				

>>>channelCodingType	Convolutional			
>>>>codingRate	Third		half	Third
>>>rateMatchingAttribute	[Tbd]	[Tbd]	[Tbd]	[Tbd]
>>>crc-Size	12	0		16
DL-AddReconfTransChInfoList				
>dl-TransportChannelIdentity	2	3	4	1
>tfs-SignallingMode				SameAsUL
>>ULTrCH-Id	2	3	4	1
>dch-QualityTarget				
>>bler-QualityValue	[Tbd]	[Tbd]	[Tbd]	[Tbd]
>tm-SignallingInfo	Absent, not essential			

3. PhyCH information

Note During handover to UTRAN only one RL is established

Parameter	Value
UL-DPCH-InfoPredef	
>ul-DPCH-PowerControlInfo	
>>dpcch-PowerOffset	[Tbd]
>>pc-Preamble	[Tbd]
>tfci-Existence	TRUE
>puncturingLimit	0.88
DL-CommonInformationPredef	
>dl-DPCH-InfoCommon	
>>spreadingFactor	128
>>pilotBits	4
>>positionFixed	Fixed