

Stockholm, Sweden

November 21st –24th , 2000

Meeting No. 17

Agenda item: Release 2000 (Release 4) UE Capability

Source: Nokia

Title: Modifications to UE capability for 25.926 for Release 4..

Document for: Decision

1. Introduction

In the last WG1 (WG1#16) meeting Tdoc R1-00-1231 was presented for comments. After some off-line comments this version focuses now just modifying the DSCH capability with reference radio access bearer combinations for Release 4 (Former Release 2000) of TR 25.926.

Thus now only the following point is addressed:

?? DSCH capabilities

Additionally it is to be noted that there will be impacts from the potential introduction of DPCH gating to the UE capability for Release 4. That should be addressed separately once exact details of the gating solution are available and thus are not covered in this contribution. Other identified items are also 1.28 Mcps TDD which will have impact on the TR 25.926 as well.

2. DSCH capability modification

The DSCH related capability, support of PDSCH, is modified for the 384 kbits/s class by changing the indication Yes/No to Yes. This was the possibility that was discussed already during the Release –99 UE capability discussions and does not require additional UE processing requirements in terms of number of codes to be received etc. when compared to the existing 384 kbits/s class definition. The work on T1 has also proceeded and covers now (functional) tests for DCH+DSCH case as well.

Suggested action

The following LS + CR is proposed to be provided to TSG RAN2 attached to a LS explaining the reasons for the changes as indicated in this paper, TSG RAN WG2 may then provide this and other possible adjustments for TSG RAN approval for the TSG RAN#11. (03/01). As TSG RAN WG2 is to cover the CR in their meeting, the update of the CR template can be done in the WG2. (for the new cover sheet)

TSG-RAN Working Group 1 (Radio L1)
Sophia Antipolis, France, 13 - 17 November 2000

R1-00-xx)

Source: TSG-RAN WG1

To: TSG-RAN WG2

Title: Modification to the UE capability in TR 25.926 for Release 4.

Contact: jussi.kahtava@nokia.com

TSG RAN WG1 discussed the UE capability updates for Rel'4 and provides attached the first identified change with respect to the DSCH support for the radio access bearer combinations. The proposed change has been noted to cause very minor (if any) added complexity for the impacted reference UE radio access bearer capability combination from the physical layer point of view and thus has been agreed in WG1. TSG RAN WG1 kindly asks TSG RAN WG2 to modify the TR 25.926 accordingly.

Adiitionally TSG RAN WG1 will provide further input for Release 4 TR 25.926 on the topics such as 1.28 Mcps TDD or DPCCH gating once the details on those topics have been finalised in TSG RAN WG1.

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.926	CR	xxx
GSM (AA.BB) or 3G (AA.BBB) specification number ?		? CR number as allocated by MCC support team
For submission to: <input style="width: 100px;" type="text"/> <i>list expected approval meeting # here</i>	for approval <input type="checkbox"/> for information <input type="checkbox"/>	Current Version: 3.1.0 strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <i>(for SMG use only)</i>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <http://ftp.3gpp.org/Information/CR-Formv2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: Nokia **Date:** November 21st 2000

Subject: DSCH related updates for UE capabilities for the UE Radio Access Capability parameter combinations

Work item:

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input type="checkbox"/> Release 00 <input checked="" type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: The DSCH status in the UE capability combination table is modified. For DSCH the combination is included to cover DSCH which does not need anything extra physical capabilities to do so.

Clauses affected:

Other specs affected:	Other 3G core specifications <input type="checkbox"/> ? List of CRs: Other GSM 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:



help.doc

<----- double-click here for help and instructions on how to create a C

5.2 Reference UE radio access capability combinations

Based on required UE radio access capabilities to support reference RABs as defined in clause 6, this clause lists reference UE Radio Access capability combinations. Subclause 5.2.1 defines reference combinations of UE radio access capability parameters common for UL and DL. Subclause 5.2.2 and 5.2.3 define reference combinations of UE radio access capability parameters that are separate for DL and UL respectively. A reference combination for common UL and DL parameters, one combination for UL parameters and one combination for DL parameters together relate to a UE with a certain implementation complexity, that allows support for one or several combined reference RABs. Combinations for UL and DL can be chosen independently. The bit rate supported by the selected combination of common UL and DL parameters needs to be at least as high as the maximum out of the supported bit rates of the selected combination of DL parameters and the selected combination of UL parameters. Different combinations have different levels of implementation complexity.

For defined reference RABs, it is possible to require a UE to meet a certain reference UE radio access capability combination. Each UE needs to have capabilities complying with a given reference radio access capability combination. Each individual radio access capability parameter as defined in Subclause 5.1 shall be signalled.

The reference combination numbers shall not be used in the signalling of UE radio access capabilities between the UE and UTRAN. Reference UE radio access capability combinations provide default configurations that should be used as a basis for conformance testing against reference RABs.

Allowed values of UE capability parameters are limited by the defined range and granularity of values in Subclause 5.1. Values might change depending on further definition of reference RABs for testing.

5.2.1 Combinations of common UE Radio Access Parameters for UL and DL

NOTE: It is FFS whether measurement-related capabilities need to be included in the combinations. These capabilities are independent from the supported RABs.

Table 5.2.1.1: UE radio access capability parameter combinations, parameters common for UL and DL

Reference combination of UE Radio Access capability parameters common for UL and DL	32kbps class	64kbps class	128kbps class	384kbps class	768kbps class	2048kbps class
PDCP parameters						
Header compression algorithm supported	No	No/Yes NOTE 1	No/Yes NOTE 1	No/Yes NOTE 1	No/Yes NOTE 1	No/Yes NOTE 1
RLC parameters						
Total RLC AM buffer size (kbytes)	10	10	50	50	100	500
Maximum number of AM entities	4	4	5	6	8	8
Multi-mode related parameters						
Support of UTRA FDD/TDD	FDD / FDD+TDD / TDD NOTE 1					
Multi-RAT related parameters						
Support of GSM	Yes/No NOTE 1					
Support of multi-carrier	Yes/No NOTE 1					
LCS related parameters						
Standalone location method(s) supported	Yes/No NOTE 1					
Network assisted GPS support	Network based / UE based / Both/ None NOTE 1					
GPS reference time capable	Yes/No NOTE 1					
Support for IPDL	Yes/No NOTE 1					
Support for OTDOA UE based method	Yes/No NOTE 1					
RF parameters for FDD						
UE power class	3 / 4 NOTE 1					
Tx/Rx frequency separation	190 MHz					
RF parameters for TDD						
Radio frequency bands	A / b / c / a+b / a+c / b+c / a+b+c NOTE 1					
Chip rate capability	1.28 / 3.84 Mchip/sec NOTE 1					
UE power class	2 / 3 NOTE 1					

NOTE 1: Options represent different combinations that should be supported with Conformance Tests.

5.2.2 Combinations of UE Radio Access Parameters for DL

Table 5.2.2.1: UE radio access capability parameter combinations, DL parameters

Reference combination of UE Radio Access capability parameters in DL	32kbps class	64kbps class	128kbps class	384kbps class	768kbps class	2048kbps class
Transport channel parameters						
Maximum sum of number of bits of all transport blocks received in TTIs that end within the same arbitrary interval of length $T < 10$ ms	640	3840	3840	6400	10240	20480
Maximum sum of number of bits of all convolutionally coded transport blocks received in TTIs that end within the same arbitrary interval of length $T < 10$ ms	640	640	640	640	640	640
Maximum sum of number of bits of all turbo coded transport blocks received in TTIs that end within the same arbitrary interval of length $T < 10$ ms	NA	3840	3840	6400	10240	20480
Maximum number of simultaneous transport channels	8	8	8	8	8	16
Maximum number of simultaneous CCTrCH (FDD)	1	2/1 NOTE 2	2/1 NOTE 2	2/1 NOTE 2	2	2
Maximum number of simultaneous CCTrCH (TDD)	2	3	3	3	4	4
Maximum total number of transport blocks received within TTIs that end at the same time	8	8	16	32	64	96
Maximum number of TFC in the TFCS	32	48	96	128	256	1024
Maximum number of TF	32	64	64	64	128	256
Support for turbo decoding	No	Yes	Yes	Yes	Yes	Yes
Physical channel parameters (FDD)						
Maximum number of DPCH/PDSCH codes to be simultaneously received	1	2/1 NOTE 2	2/1 NOTE 2	3	3	3
Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH).	1200	3600/2400 NOTE 2	7200/4800 NOTE 2	19200	28800	57600
Support for SF 512	No	No	No	No	No	No
Support of PDSCH	No	Yes/No NOTE 1	Yes/No NOTE 1	No /Yes NOTE 1	Yes	Yes
Maximum number of simultaneous S-CCPCH radio links	1	1	1	1	1	1
Physical channel parameters (TDD)						
Maximum number of timeslots per frame	1	2	4	5	10	12
Maximum number of physical channels per frame	8	9	14	28	64	136
Minimum SF	16	16	16	1/16 NOTE 1	1/16 NOTE 1	1/16 NOTE 1
Support of PDSCH	Yes/No NOTE 1	Yes	Yes	Yes	Yes	Yes

NOTE 1: Options represent different combinations that should be supported with conformance tests.

NOTE 2: Options depend on the support of PDSCH. The highest value is required if PDSCH is supported.

