3GPP TSG RAN Meeting #28   **RP-050203**
Quebec, Canada, 1 - 3 June 2005

Title   **CRs (Rel-5 & Rel-6 CatA) to 25.102 for HSDPA related corrections**
Source   **3GPP TSG RAN WG4 (Radio)**
Agenda Item   **7.5.5**

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-050463	25.102	147		F	Rel-5	5.6.0	Correction of parameters for HSDPA fixed reference channel test	TEI5, HSDPA-RF
R4-050464	25.102	148		A	Rel-6	6.0.0	Correction of parameters for HSDPA fixed reference channel test	TEI5, HSDPA-RF
R4-050465	25.102	149		F	Rel-5	5.6.0	Correction of parameters for TDD 1.28 Mcps HSDPA fixed and variable reference channel tests	TEI5, HSDPA-RF
R4-050466	25.102	150		A	Rel-6	6.0.0	Correction of parameters for TDD 1.28 Mcps HSDPA fixed and variable reference channel tests	TEI5, HSDPA-RF

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CHANGE REQUEST

⌘   **25.102** CR **147**   ⌘**rev**   ⌘   Current version: **5.6.0** ⌘

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Proposed change affects: UICC apps⌘ ☐   ME **X** Radio Access Network **X** Core Network ☐

Title: ⌘	Correction of parameters for HSDPA fixed reference channel test
Source: ⌘	3GPP TSG RAN WG4 (Radio)
Work item code:⌘	TEI5, HSDPA-RF ***Date:*** ⌘ 16/05/2005

Category: ⌘ **F**   ***Release:*** ⌘ Rel-5

Use one of the following categories:
F *(correction)*
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Detailed explanations of the above categories can
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R99   *(Release 1999)*
Rel-4   *(Release 4)*
Rel-5   *(Release 5)*
Rel-6   *(Release 6)*
Rel-7   *(Release 7)*

Reason for change: ⌘	Number of timeslots used in the fixed reference channel tests for HSDPA is not specified. ACK / NACK is defined as being reported on a non-existant physical channel.
Summary of change:⌘	Number of timeslots used in the fixed reference channel for HSDPA is defined as 8 in tables 9.2 and 9.4 (as per the simulation assumptions that were used to derive the performance requirements: R4-021539). Emulator behaviour is defined as operating in response to field state of HS-SICH rather than non-existant HS-DPCCH.
Consequences if not approved: ⌘	HSDPA fixed reference channel test cannot be performed.

Clauses affected: ⌘	9.1.1, 9.1.1.1, 9.1.1.2

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘	

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9.1.1 HS-DSCH throughput for fixed reference channels

The performance requirements in this subclause apply for the reference measurement channels specified in Annex A.3.2.

During the Fixed Reference Channel tests the behaviour of the Node-B emulator in response to the ACK/NACK signalling field of the HS-SICH is specified in Table 9.1:

Table 9.1: Node-B Emulator Behaviour in response to ACK/NACK/DTX

HS-~~DPCCH~~ SICH ACK/NACK Field State	Node-B Emulator Behaviour
ACK	ACK: new transmission using 1st redundancy version (RV)
NACK	NACK: retransmission using the next RV (up to the maximum permitted number or RV's)
DTX	DTX: retransmission using the RV previously transmitted to the same H-ARQ process

9.1.1.1 Minimum requirement QPSK, Fixed Reference Channel, 7,3 Mbps – Category 8 - UE

For the parameters specified in Table 9.2, the measured throughput R shall exceed the throughput specified in Table 9.3 for each radio condition.

Table 9.2: Test parameters for fixed reference measurement channel requirements for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) QPSK

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	QPSK			
Scrambling code and basic midamble code number*	-	0, 1			
Number of TS	-	8			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..16			C(i,16) i=1..14
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence**	-	{0,0,0,0} s=1, R=0, b=0			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-12,04			-11.46
$\dfrac{\sum HS-PDSCH\_E_c}{I_{or}}$	dB	0			
I_{oc}	dBm/3,84 MHz	-60			
Note *: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code. Note **: This sequence implies Chase combining					

Table 9.3: Performance requirements for fixed reference measurement channel requirement in multipath channels for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) QPSK

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	8,5	1300
2	PB3	9,0	1300
3	VA30	9,75	1300
4	VA120	11,5	1400

9.1.1.2   Minimum requirement 16QAM, Fixed Reference Channel, 7,3 Mbps – Category 8 - UE

For the parameters specified in Table 9.4, the measured throughput R shall exceed the throughput specified in Table 9.5 for each radio condition.

Table 9.4: Test parameters for fixed reference measurement channel requirements for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) 16QAM

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	16QAM			
Scrambling code and basic midamble code number*	-	0, 1			
Number of TS	-	8			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..16			C(i,16) i=1..14
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence**	-	{0,0,0,0} s=1, r=0			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-12,04			-11,46
$\dfrac{\sum HS-PDSCH\_E_c}{I_{or}}$	dB	0			
I_{oc}	dBm/3,84 MHz	-60			
Note *: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					
Note **: This sequence implies Chase combining					

Table 9.5: Performance requirements for fixed reference measurement channel requirement in multipath channels for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) 16QAM

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	16,0	2600
2	PB3	17,5	2600
3	VA30	18,5	2600
4	VA120	14,5	1600

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CHANGE REQUEST

⌘	**25.102** CR **148**	⌘ **rev**		⌘	Current version:	**6.0.0**	⌘

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Proposed change affects:	UICC apps⌘ ☐	ME **X**	Radio Access Network **X**	Core Network ☐

Title:	⌘	Correction of parameters for HSDPA fixed reference channel test

Source:	⌘	3GPP TSG RAN WG4 (Radio)

Work item code: ⌘	TEI5, HSDPA-RF	***Date:*** ⌘	16/05/2005

Category:	⌘	**A**		***Release:*** ⌘	Rel-6

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C *(functional modification of feature)*
D *(editorial modification)*
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R97   *(Release 1997)*
R98   *(Release 1998)*
R99   *(Release 1999)*
Rel-4   *(Release 4)*
Rel-5   *(Release 5)*
Rel-6   *(Release 6)*
Rel-7   *(Release 7)*

Reason for change:	⌘	Number of timeslots used in the fixed reference channel tests for HSDPA is not specified. ACK / NACK is defined as being reported on a non-existant physical channel.

Summary of change: ⌘	Number of timeslots used in the fixed reference channel for HSDPA is defined as 8 in tables 9.2 and 9.4 (as per the simulation assumptions that were used to derive the performance requirements: R4-021539). Emulator behaviour is defined as operating in response to field state of HS-SICH rather than non-existant HS-DPCCH.

Consequences if not approved:	⌘	HSDPA fixed reference channel test cannot be performed.

Clauses affected:	⌘	9.1.1, 9.1.1.1, 9.1.1.2

		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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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.

9.1   Performance requirement for 3.84 Mcps TDD option

The requirements are stated for the HSDPA UE reference combination classes specified in [2] and under the multipath propagation conditions specified in Annex B. The performance metric for HS-DSCH requirements in multi-path propagation conditions is the throughput R measured on HS-DSCH.

9.1.1   HS-DSCH throughput for fixed reference channels

The performance requirements in this subclause apply for the reference measurement channels specified in Annex A.3.2.

During the Fixed Reference Channel tests the behaviour of the Node-B emulator in response to the ACK/NACK signalling field of the HS-SICH is specified in Table 9.1:

Table 9.1: Node-B Emulator Behaviour in response to ACK/NACK/DTX

HS-DPCCH-SICH ACK/NACK Field State	Node-B Emulator Behaviour
ACK	ACK: new transmission using 1st redundancy version (RV)
NACK	NACK: retransmission using the next RV (up to the maximum permitted number or RV's)
DTX	DTX: retransmission using the RV previously transmitted to the same H-ARQ process

9.1.1.1   Minimum requirement QPSK, Fixed Reference Channel, 7,3 Mbps – Category 8 - UE

For the parameters specified in Table 9.2, the measured throughput R shall exceed the throughput specified in Table 9.3 for each radio condition.

Table 9.2: Test parameters for fixed reference measurement channel requirements for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) QPSK

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	QPSK			
Scrambling code and basic midamble code number*	-	0, 1			
Number of TS	-	8			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..16			C(i,16) i=1..14
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence**	-	{0,0,0,0} s=1, R=0, b=0			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-12,04			-11.46
$\dfrac{\sum HS-PDSCH\_E_c}{I_{or}}$	dB	0			
I_{oc}	dBm/3,84 MHz	-60			
Note *: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code. Note **: This sequence implies Chase combining					

Table 9.3: Performance requirements for fixed reference measurement channel requirement in multipath channels for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) QPSK

Test Number	Propagation conditions	$\frac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	8,5	1300
2	PB3	9,0	1300
3	VA30	9,75	1300
4	VA120	11,5	1400

9.1.1.2 Minimum requirement 16QAM, Fixed Reference Channel, 7,3 Mbps – Category 8 - UE

For the parameters specified in Table 9.4, the measured throughput R shall exceed the throughput specified in Table 9.5 for each radio condition.

Table 9.4: Test parameters for fixed reference measurement channel requirements for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) 16QAM

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	16QAM			
Scrambling code and basic midamble code number*	-	0, 1			
Number of TS	-	8			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..16			C(i,16) i=1..14
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence**	-	{0,0,0,0} s=1, r=0			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-12,04			-11,46
$\dfrac{\sum HS-PDSCH\_E_c}{I_{or}}$	dB	0			
I_{oc}	dBm/3,84 MHz	-60			
Note *: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					
Note **: This sequence implies Chase combining					

Table 9.5: Performance requirements for fixed reference measurement channel requirement in multipath channels for 7,3 Mbps – Category 8 - UE (3,84 Mcps TDD Option) 16QAM

Test Number	Propagation conditions	$\frac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	16,0	2600
2	PB3	17,5	2600
3	VA30	18,5	2600
4	VA120	14,5	1600

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CHANGE REQUEST

⌘ **25.102** CR **149** ⌘ **rev** ⌘ Current version: **5.6.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME **X** Radio Access Network **X** Core Network ☐

Title: ⌘	Correction of parameters for TDD 1.28 Mcps HSDPA fixed and variable reference channel tests
Source: ⌘	3GPP TSG RAN WG4 (Radio)
Work item code: ⌘	TEI5, HSDPA-RF ***Date:*** ⌘ 16/05/2005
Category: ⌘ **F**	***Release:*** ⌘ Rel-5

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  Rel-4 (Release 4)
  Rel-5 (Release 5)
  Rel-6 (Release 6)
  Rel-7 (Release 7)

Reason for change: ⌘	Number of timeslots used in the fixed and variable reference channel tests for TDD 1.28 Mcps HSDPA is not specified. ACK / NACK is defined as being reported on a nonexistant physical channel.
Summary of change: ⌘	Number of timeslots used in the fixed and variable reference channel tests for TDD 1.28 Mcps HSDPA is defined as 4 in tables 9.9, 9.11 and 9.13 (as per the simulation assumptions that were used to derive the performance requirements: R4-021218).

Emulator behaviour is defined as operating in response to field state of HS-SICH rather than non-existant HS-DPCCH. |
| ***Consequences if not approved:*** ⌘ | TDD 1.28 Mcps HSDPA fixed and variable reference channel test cannot be performed. |

Clauses affected: ⌘	9.2.1, 9.2.1.1, 9.2.1.2, 9.2.2.1

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

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9.2.1 HS-DSCH throughput for fixed reference channels

The performance requirements in this subclause apply for the reference measurement channels specified in Annex A.3.2.

During the Fixed Reference Channel tests the behaviour of the Node-B emulator in response to the ACK/NACK signalling field of the HS-SICH is specified in Table 9.8

Table 9.8: Node-B Emulator Behaviour in response to ACK/NACK/DTX

HS-~~DPCCH~~ SICH ACK/NACK Field State	Node-B Emulator Behaviour
ACK	ACK: new transmission using 1st redundancy version (RV)
NACK	NACK: retransmission using the next RV (up to the maximum permitted number or RV's)
DTX	DTX: retransmission using the RV previously transmitted to the same H-ARQ process

9.2.1.1 Minimum requirement QPSK, Fixed Reference Channel, 1.4 Mbps UE class

For the parameters specified in Table 9.9, the measured throughput R shall exceed the throughput specified in Table 9.10 for each radio condition.

Table 9.9: Test parameters for fixed reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option) QPSK

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	QPSK			
Scrambling code and basic midamble code number*	-	0			
Number of TS	-	4			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..10			
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence	-	{0,0,0,0}			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-10			
I_{oc}	dBm/1.28 MHz	-60			
*Note: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					

Table 9.10: Performance requirements for fixed reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option) QPSK

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	375
2	PB3	10	378
3	VA30	10	338
4	VA120	10	281

9.2.1.2   Minimum requirement 16QAM, Fixed Reference Channel, 1.4 Mbps UE class

For the parameters specified in Table 9.11, the measured throughput R shall exceed the throughput specified in Table 9.12 for each radio condition.

Table 9.11: Test parameters for fixed reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option) 16QAM

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	16QAM			
Scrambling code and basic midamble code number*	-	0			
Number of TS	-	4			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..9			
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence	-	{6,2,1,5}			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-9.5			
I_{oc}	dBm/1.28 MHz	-60			
*Note: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					

Table 9.12: Performance requirements for fixed reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option) 16QAM

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	379
2	PB3	10	353
3	VA30	10	326
4	VA120	10	289

9.2.2   HS-DSCH throughput for Variable Reference Channels

9.2.2.1   Minimum requirement, Variable Reference Channel - 1.4 Mbps UE class

For the parameters specified in Table 9.13 the measured throughput R shall exceed the throughput specified in Table 9.14 for each radio condition. The Variable Reference Channel is specified in Annex A.3.3.

Table 9.13: Test parameters for variable reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option)

Parameters	Unit	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
HS-PDSCH Modulation and transport block size	-	* See note 1					
Scrambling code and basic midamble code number * See note 2	-	0					
Number of TS	-	4					
Number of $DPCH_o$ per timeslot	-	0			7		
Number of HS-PDSCH codes per timeslot	-	10			3		
HS-PDSCH Channelization Codes * See note 2	C(k,Q)	C(i,16) i=1..10			TBD		
Number of Hybrid ARQ processes	-	4					
Maximum number of Hybrid ARQ transmissions	-	1					
Redundancy and constellation version coding sequence	Xrv	0					
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-10			-10		
I_{oc}	dBm/1.28 MHz	-60					
Note 1) As requested by the last received CQI report							
Note 2) Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.							
Note 3) If the indicated CQI is 0, the Node-B emulator shall format the next HS-PDSCH transmission with the transport block size and the modulation scheme that were previously used.							

Table 9.14: Performance requirements for variable reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option)

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	445
2	PB3	10	446
3	VA30	10	271
4	PA3	8	98
5	PB3	8	100
6	VA30	8	64

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CHANGE REQUEST

⌘　　　**25.102** CR **150**　⌘**rev**　　⌘　Current version: **6.0.0**　⌘

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Proposed change affects:　UICC apps⌘ ☐　　　ME **X** Radio Access Network **X** Core Network ☐

Title: ⌘	Correction of parameters for TDD 1.28 Mcps HSDPA fixed and variable reference channel tests	
Source: ⌘	3GPP TSG RAN WG4 (Radio)	
Work item code: ⌘	TEI5, HSDPA-RF	***Date:*** ⌘ 16/05/2005
Category: ⌘	**A**	***Release:*** ⌘ Rel-6

Use <u>one</u> of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
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Detailed explanations of the above categories can
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Rel-5　(Release 5)
Rel-6　(Release 6)
Rel-7　(Release 7)

Reason for change: ⌘	Number of timeslots used in the fixed and variable reference channel tests for TDD 1.28 Mcps HSDPA is not specified. ACK / NACK is defined as being reported on a nonexistant physical channel.
Summary of change: ⌘	Number of timeslots used in the fixed and variable reference channel tests for TDD 1.28 Mcps HSDPA is defined as 4 in tables 9.9, 9.11 and 9.13 (as per the simulation assumptions that were used to derive the performance requirements: R4-021218). Emulator behaviour is defined as operating in response to field state of HS-SICH rather than non-existant HS-DPCCH.
Consequences if not approved: ⌘	TDD 1.28 Mcps HSDPA fixed and variable reference channel test cannot be performed.

Clauses affected: ⌘	9.2.1, 9.2.1.1, 9.2.1.2, 9.2.2.1

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments: ⌘	

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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.

9.2.1   HS-DSCH throughput for fixed reference channels

The performance requirements in this subclause apply for the reference measurement channels specified in Annex A.3.2.

During the Fixed Reference Channel tests the behaviour of the Node-B emulator in response to the ACK/NACK signalling field of the HS-SICH is specified in Table 9.8

Table 9.8: Node-B Emulator Behaviour in response to ACK/NACK/DTX

HS-~~DPCCH~~ SICH ACK/NACK Field State	Node-B Emulator Behaviour
ACK	ACK: new transmission using 1st redundancy version (RV)
NACK	NACK: retransmission using the next RV (up to the maximum permitted number or RV's)
DTX	DTX: retransmission using the RV previously transmitted to the same H-ARQ process

9.2.1.1   Minimum requirement QPSK, Fixed Reference Channel, 1.4 Mbps UE class

For the parameters specified in Table 9.9, the measured throughput R shall exceed the throughput specified in Table 9.10 for each radio condition.

Table 9.9: Test parameters for fixed reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option) QPSK

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	QPSK			
Scrambling code and basic midamble code number*	-	0			
Number of TS	-	4			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..10			
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence	-	{0,0,0,0}			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-10			
I_{oc}	dBm/1.28 MHz	-60			
*Note: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					

Table 9.10: Performance requirements for fixed reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option) QPSK

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	375
2	PB3	10	378
3	VA30	10	338
4	VA120	10	281

9.2.1.2   Minimum requirement 16QAM, Fixed Reference Channel, 1.4 Mbps UE class

For the parameters specified in Table 9.11, the measured throughput R shall exceed the throughput specified in Table 9.12 for each radio condition.

Table 9.11: Test parameters for fixed reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option) 16QAM

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
HS-PDSCH Modulation	-	16QAM			
Scrambling code and basic midamble code number*	-	0			
Number of TS	-	4			
HS-PDSCH Channelization Codes*	C(k,Q)	C(i,16) i=1..9			
Number of Hybrid ARQ processes	-	4			
Maximum number of Hybrid ARQ transmissions	-	4			
Redundancy and constellation version coding sequence	-	{6,2,1,5}			
$\dfrac{HS-PDSCH\_E_c}{I_{or}}$	dB	-9.5			
I_{oc}	dBm/1.28 MHz	-60			
*Note: Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.					

Table 9.12: Performance requirements for fixed reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option) 16QAM

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	379
2	PB3	10	353
3	VA30	10	326
4	VA120	10	289

9.2.2   HS-DSCH throughput for Variable Reference Channels

9.2.2.1   Minimum requirement, Variable Reference Channel - 1.4 Mbps UE class

For the parameters specified in Table 9.13 the measured throughput R shall exceed the throughput specified in Table 9.14 for each radio condition. The Variable Reference Channel is specified in Annex A.3.3.

Table 9.13: Test parameters for variable reference measurement channel requirements for 1.4 Mbps UE class (1.28 Mcps TDD Option)

Parameters	Unit	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
HS-PDSCH Modulation and transport block size	-	* See note 1					
Scrambling code and basic midamble code number * See note 2	-	0					
Number of TS	-	4					
Number of DPCH$_o$ per timeslot	-	0			7		
Number of HS-PDSCH codes per timeslot	-	10			3		
HS-PDSCH Channelization Codes * See note 2	C(k,Q)	C(i,16) i=1..10			TBD		
Number of Hybrid ARQ processes	-	4					
Maximum number of Hybrid ARQ transmissions	-	1					
Redundancy and constellation version coding sequence	Xrv	0					
$\dfrac{HS - PDSCH\_E_c}{I_{or}}$	dB	-10			-10		
I_{oc}	dBm/1.28 MHz	-60					
Note 1) As requested by the last received CQI report							
Note 2) Refer to TS 25.223 for definition of channelization codes, scrambling code and basic midamble code.							
Note 3) If the indicated CQI is 0, the Node-B emulator shall format the next HS-PDSCH transmission with the transport block size and the modulation scheme that were previously used.							

Table 9.14: Performance requirements for variable reference measurement channel requirement in multipath channels for 1.4 Mbps UE class (1.28 Mcps TDD Option)

Test Number	Propagation conditions	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	R (Throughput) [kbps]
1	PA3	10	445
2	PB3	10	446
3	VA30	10	271
4	PA3	8	98
5	PB3	8	100
6	VA30	8	64