

Source: Secretary

Title: Proposed "CR" to out-of-date Work Item sheets

This document aims at correcting a number of WI sheets that seem to be out of date with the latest understanding of them in TSG-RAN and/or its WGs.

7. Void (was Hybrid ARQ II/III)

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000054)

This Work Item was deleted from the approved Work Items at TSG-RAN #14

Work Item Description

Title

Hybrid ARQ type II/III

1 ——— 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 ——— ~~Linked work items~~

none

3 ——— ~~Justification~~

~~This feature has been shown to have the potential of efficiently enhancing the performance of packet data transmission by transmitting incremental redundancy at the request of the receiver.~~

4 ——— ~~Objective~~

~~In order to support the general mechanism, required signalling, and combining of existing information with incremental redundancy, the specifications for physical layer, as well as for higher layers and testing will be changed and/or extended. Note that Hybrid ARQ type I with soft combining is a special case of Hybrid ARQ type II.~~

5 ——— ~~Service Aspects~~

————— *None*

6 ——— ~~MMI Aspects~~

————— *None*

7 ——— ~~Charging Aspects~~

————— *None*

8 ————— **Security Aspects**

————— *None*

9 ————— **Impacts**

Affects	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	
Don't know					

10 ————— **Expected Output and Time scale (to be updated at each plenary)**

New specifications						
Spec-No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
25.835	Hybrid ARQ II/III	WG2		RAN #12	RAN #13	
25.837	Hybrid ARQ II/III	WG3		RAN #12	RAN #13	
Affected existing specifications						
Spec-No.	CR	Subject	Approved at plenary#		Comments	
25.211		Physical channels and mapping of transport channels onto physical channels (FDD)	RAN #13			
25.212		Multiplexing and Channel Coding (FDD)	RAN #13			
25.214		Physical Layer Procedures (FDD)	RAN #13			
25.221		Physical channels and mapping of transport channels onto physical channels (TDD)	RAN #13			
25.222		Multiplexing and Channel Coding (TDD)	RAN #13			
25.224		Physical Layer Procedures (TDD)	RAN #13			
25.301		Radio Interface Protocol Architecture	RAN #13			
25.302		Services provided by the physical layer	RAN #13			
25.303		Interlayer procedures in connected mode	RAN #13			
25.304		UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode	RAN #13			
25.321		MAC Protocol Specification	RAN #13			
25.322		RLC Protocol Specification	RAN #13			
25.331		RRC Protocol Specification	RAN #13			
25.401		UTRAN Overall Description	RAN #13			
25.420		UTRAN Iur Interface: General Aspects and Principles	RAN #13			
25.423		UTRAN Iur Interface-RNSAP Signalling	RAN #13			
25.425		UTRAN Iur interface user plane protocols for CCH data streams	RAN #13			
25.430		UTRAN Iub Interface: General Aspects and Principles	RAN #13			
25.433		UTRAN Iub Interface-NBAP Signalling	RAN #13			
25.435		UTRAN Iub interface user plane protocols for CCH data streams	RAN #13			

11 ————— **Work item rapporteurs**

~~Armin Sitte, Siemens AG~~

~~12 Work item leadership~~

~~TSG-RAN-WG2~~

~~13 Supporting Companies~~

~~TSG-RAN~~

~~14 Classification of the WI (if known)~~

	Feature (go to 14a)
-X	Building Block (go to 14b)
	Work Task (go to 14c)

~~14a The WI is a Feature: List of building blocks under this feature~~

~~(list of Work Items identified as building blocks)~~

~~14b The WI is a Building Block: parent Feature~~

~~Radio Interface Improvements~~

~~14c The WI is a Work Task: parent Building Block~~

~~(one Work Item identified as a building block)~~

15. Radio access bearer support enhancement

Last distributed as: RP-010703 (originally RP-000140)

Work Item Description

Title

Radio Access Bearer support enhancement

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

3 Justification

The increasing interest in IP based services demands special optimisation of the means by which a radio access bearer can be provided by UTRAN.

4 Objective

This work item should have the scope of adding necessary functionality to the Uu, Iur and Iu interface in order to efficiently support RT traffic, e.g. VoIP. Examples of such functionality are:

- Radio Access Bearer multiplexing in PDCP
- Support of variable formats over Iu and unequal error protection over Uu
- Channel type switching for logical channels
 - Today it is only possible to switch all logical channels of one UE, not individual. For DSCH it would be much better to be able to switch single logical channels
- IP header removal as developed within GERAN
- RFC3095 context relocation in SRNS relocation

5 Service Aspects

The intention with the work item is to better and more efficient support IP based services.

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be defined on a per work task basis updated at each plenary)

This is a generic task which will be valid for all major releases

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
					RAN#14	
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#		Comments

11 Work item rapporteurs

TSG-RAN WG2: Ainkaran Krishnarajah (Ericsson)

12 Work item leadership

TSG-RAN WG2

13 Supporting Companies

TSG-RAN

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature
(one Work Item identified as a feature)

- RAN Improvement

14c The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)

35. UE positioning enhancements

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000509)

Work Item Description

1. Title

UE positioning enhancements

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

none

3 Justification

UE positioning is a function of UE and UTRAN (Access Stratum) which can be utilised for a number of purposes:

- Radio Resource Management
- Support for location based services (LCS)

Different accuracy can be requested when positioning a UE for these purposes.

4 Objective

The purpose of this work item are to increase the accuracy of the UE positioning or define methods allowing UE positioning with less complexity for a given accuracy.

Examples of enhancements are:

- Addition of IPDL for UE positioning in TDD
- Almanac corrections

5 **Service Aspects**

None

6 **MMI-Aspects**

None

7 **Charging Aspects**

None

8 **Security Aspects**

None

9 **Impacts**

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	
Don't know					

10 Expected Output and Time scale (to be updated at each plenary defined on a work task basis)

This is a generic task which will be valid for all major releases

New specifications						
Spec.No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec.No.	CR	Subject		Approved at plenary#		Comments
25.305		Stage 2 Functional Specification of Location Services in UTRAN		RAN #11		
25.123		Requirements for Support of Radio Resource Management (TDD)		RAN #11		
25.224		Physical Layer Procedures (TDD)		RAN #11		
25.225		Physical layer – Measurements (TDD)		RAN #11		
25.302		Services provided by the physical layer		RAN #11		

25.303		Interlayer procedures in connected mode	RAN #11	
25.304		UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode	RAN #11	
25.331		RRC Protocol Specification	RAN #11	
25.420		UTRAN Iur Interface: General Aspects and Principles	RAN #11	
25.423		UTRAN Iur Interface RNSAP Signalling	RAN #11	
25.430		UTRAN Iub Interface: General Aspects and Principles	RAN #11	
25.433		UTRAN Iub Interface NBAP Signalling	RAN #11	

11 Work item rapporteur

Mark Beckmann, Siemens AG

12 Work item leadership

TSG-RAN WG2

13 Supporting Companies

TSG-RAN

14 Classification of the WI (if known)

	Feature (go to 14a)
x	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

UE positioning

14c The WI is a Work Task: parent Building Block

39. UMTS 1800

Last distributed as: RAN_Work_Items_after_RAN_13 (originally RP-000448)

Work Item Description

Title

UMTS 1800

X	Radio Access
	Core Network
	Services

2 Linked work items

none

3 Justification

A decision was made at WARC 00 to extend the current IMT 2000 frequency allocation to include the current 2G cellular bands.

4 Objective

The purpose of this work item is to add the following frequency band to the 3GPP specifications

UMTS 1 800 Band:

1 710 - 1 785 MHz: mobile transmit, base receive

1 805 - 1 880 MHz: base transmit, mobile receive

A report will be generated to study the radio compatibilities of DCS1800 and UMTS1800.

TSG RAN WG2 will be asked to study the terminal capabilities. TSG RAN WG3 will be asked to study any possible interface impacts.

The following time schedule is considered for TSG RAN:

Task	Planned Start	Planned Finish
Work Item Creation	9/2000	9/2000
Work Item Approval		9/2000
Drafting and discussion, updates of specifications	9/2000	12/2000
Update of specifications	12/2000	6/2001
Submission of RAN WG4 specifications to TSG RAN for approval		6/2001
Possible remaining corrections, clarifications and test specifications	12/2000	6/2001

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject	Approved at plenary#		Comments	
25.101		UE Radio transmission and reception (FDD)	RAN #14			
25.104		UTRA (BS) FDD; Radio transmission and reception	RAN #14			
25.141		Base station conformance testing (FDD)	RAN #14			
34.121		Terminal Conformance Specification, Radio Transmission and Reception	T #14			

11 Work item rapporteurs

Howard Benn (howard.benn@motorola.com)

12 Work item leadership

TSG-RAN WG4

13 Supporting Companies

TSG-RAN

14 Classification of the WI (if known)

	Feature (go to 14a)
	Building Block (go to 14b)
X	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature

This is a building block part of the radio interface improvement feature.

14c The WI is a Work Task: parent Building Block

Radio Interface Improvement Feature

43. High Speed Downlink Packet Access (HSDPA)

Last distributed as: RP-010262

Work Item Description

Title

High Speed Downlink Packet Access

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

HSDPA Physical Layer
HSDPA Layer 2 and 3 Protocol Aspects
HSDPA UTRAN Iub/Iur Protocol Aspects
HSDPA RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

3 Justification

In RAN#7 a study item on High Speed Downlink Packet Access was approved. The aim of the study was to look at the feasibility and potential of various techniques such as Adaptive Modulation and Coding and Hybrid ARQ for increasing throughput and peak data rates with reduction in concomitant delay. Since RAN#7, RAN WG1 and RAN WG2 have considered many contributions on this subject and have concluded on the feasibility and potential of various techniques and provided recommendations on the inclusion of these techniques for Rel-5. This work item is in line with the recommendations from WG2 and WG1.

4 Objective

The technical objective of this work item is the integration of HSDPA functionality in UTRA, in line with recommendations from WG1 and WG2, to increase the throughput and peak data rates while reducing the overall delay. The works tasks include support for both FDD and TDD. In those cases where differences between FDD and TDD are identified, they should be considered as separate work tasks.

- For physical layer, the features include:
 - Physical and Transport Channels mapping
 - Higher Order Modulation
 - Multiplexing and Hybrid ARQ Channel Coding
 - Physical Layer procedures

- For higher layers:
 - Architecture aspects
 - MAC entity (Scheduling and Hybrid ARQ protocol)
 - Interlayer procedures in connected mode
 - Control plane aspects
 - UE capabilities

- For Iur/Iub interface:
For the adoption of HSDPA some modifications to the present Iub and Iur signalling and user data streams will need to be included.

- For radio transmission and reception:
 - UE radio transmission and reception
 - BTS radio transmission and reception
 - BTS Conformance testing
 - Requirements for support of Radio Resource Management

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments

| The expected finalisation date is TSG-RAN #1415

11 Work item rapporteurs

Ravi Kuchibhotla (Motorola)

12 Work item leadership

TSG-RAN WG2

13 Supporting Companies

Motorola, Nokia, Ericsson, Vodafone Group, Mannesmann Mobilfunk

14 Classification of the WI (if known)

X	Feature (go to 14a)
	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

HSDPA Physical Layer

HSDPA Layer 2 and 3 Protocol Aspects

HSDPA UTRAN Iub/Iur Protocol Aspects

HSDPA RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

14b The WI is a Building Block: parent Feature

(one Work Item identified as a feature)

14c The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)

44. High Speed Downlink Packet Access (HSDPA) - Physical Layer

Last distributed as: RP-010262

Work Item Description

Title

High Speed Downlink Packet Access - Physical Layer

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

HSDPA Layer 2 and 3 Protocol Aspects

HSDPA UTRAN Iub/Iur Protocol Aspects

HSDPA RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

3 Justification

The study item on HSDPA was concluded in RAN WG#11 with recommendations on the techniques to be included in Rel-5. This work item enables the inclusion of the identified techniques at the physical layer.

4 Objective

The technical objective of this work item is the integration of HSDPA physical layer functionality in UTRA, while maintaining commonality with the R99 general physical layer aspects to the maximum extent possible.

- For physical layer, the features include:
 - Physical and Transport Channels mapping
 - Higher Order Modulation
 - Multiplexing and Hybrid ARQ Channel Coding
 - Physical Layer procedures

The work task for physical layer procedures will also consider additional physical layer measurements that may be required.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
25.201		Physical layer – General description			RAN#1415	
25.211		Physical channels and mapping of transport channels onto physical channels (FDD)			RAN#1415	
25.212		Multiplexing and channel coding (FDD)			RAN#1415	
25.213		Spreading and modulation (FDD)			RAN#1415	
25.214		Physical layer procedures(FDD)			RAN#1415	
25.221		Physical channels and mapping of transport channels onto physical channels (TDD)			RAN#1415	
25.222		Multiplexing and channel coding (TDD)			RAN#1415	
25.223		Spreading and modulation (TDD)			RAN#1415	
25.224		Physical layer procedures(TDD)			RAN#1415	

The expected finalisation date is TSG-RAN #1415

11 Work item rapporteurs

Amitava Ghosh (Motorola)

12 Work item leadership

TSG-RAN WG1

13 Supporting Companies

Motorola, Nokia, Ericsson, Vodafone Group, Mannesmann Mobilfunk

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

High Speed Downlink Packet Access (HSDPA)

14c The WI is a Work Task: parent Building Block

45. High Speed Downlink Packet Access (HSDPA) - layer 2 and 3 aspects

Last distributed as: RP-010262

Work Item Description

Title

High Speed Downlink Packet Access - layer 2 and 3 aspects

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

HSDPA Physical Layer
HSDPA UTRAN Iub/Iur Protocol Aspects
HSDPA RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

3 Justification

The study item on HSDPA was concluded in RAN WG#11 with recommendations on the techniques to be included in Rel-5. This work item enables the inclusion of the identified techniques at layers 2 and 3.

4 Objective

The technical objective of this work item is the integration of HSDPA physical layer functionality in UTRA, while maintaining commonality with the R99 general layer 2 and 3 aspects to the maximum extent possible. While most of the control aspects will be identical to those for R99, some additional signaling for the configuration of HSDPA channels will need to be defined. Also, in order to enable the support of fast scheduling, support for a new MAC-HSDSCH entity shall be included. This new entity at the Node B will handle all the scheduling and HARQ (non-physical layer aspects) of the HSDPA feature. UE capabilities will need to be updated to indicate support of HSDPA. Physical Layer aspects of UE capabilities will be handled by WG1.

- For layers 2 and 3, the features include:
 - Architecture aspects
 - MAC entity (Scheduling and Hybrid ARQ protocol)
 - Interlayer procedures in connected mode
 - Control plane aspects
 - UE capabilities

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
25.301		Radio interface protocol architecture			RAN#1415	
25.302		Service provided by the physical Layer			RAN#1415	
25.303		UE functions and Inter-layer procedures in connected mode			RAN#1415	
25.306		UE Radio Access Capabilites			RAN#1415	
25.321		Medium access control (MAC) protocol specification			RAN#1415	
25.331		Radio resource control (RRC) protocol specification			RAN#1415	

The expected finalisation date is TSG-RAN #1415

11 Work item raporteurs

Ravi Kuchibhotla (Motorola)

12 Work item leadership

TSG-RAN WG2

13 Supporting Companies

Motorola, Nokia, Ericsson, Vodafone Group, Mannesmann Mobilfunk

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

High Speed Downlink Packet Access (HSDPA)

14c The WI is a Work Task: parent Building Block

46. High Speed Downlink Packet Access (HSDPA) - Iub/Iur Protocol Aspects

Last distributed as: RP-010262

Work Item Description

Title

High Speed Downlink Packet Access - Iub/Iur Protocol Aspects

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

HSDPA Physical Layer
HSDPA Layer 2 and 3 Protocol Aspects
HSDPA RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

3 Justification

The study item on HSDPA was concluded in RAN WG#11 with recommendations on the techniques to be included in Rel-5. This work item enables support of the identified techniques over the Iub and Iur.

4 Objective

The technical objective of this work item is the integration of HSDPA physical layer functionality in UTRA, while maintaining commonality with the R99 general Iub and Iur aspects to the maximum extent possible. While most of the control aspects will be identical to those for R99, some additional signaling for the configuration of HSDPA shared channels will need to be defined. Also frame protocol for the user data stream will need to be defined for the HSDPA shared channels. Flow control for the HSDPA channels on the Iub will need to be supported.

- For Iub and Iur, the features include:
 - Iub and Iur architecture aspects
 - Iub and Iur control plane aspects
 - Iub and Iur user plane aspects

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
TS 25.401		UTRAN Overall Description			RAN #1415	
TS 25.420		UTRAN Iur Interface: General Aspects and Principles			RAN #1415	
TS 25.422		UTRAN Iur interface signalling transport			RAN #1415	
TS 25.423		UTRAN Iur Interface RNSAP Signalling			RAN #1415	
TS 25.424		UTRAN Iur interface data transport & transport signalling for CCH data streams			RAN #1415	
TS 25.425		UTRAN Iur interface user plane protocols for CCH data streams			RAN #1415	
TS 25.426		UTRAN Iur and Iub Interface Data Transport & Transport Signalling for DCH Data Streams			RAN #1415	
TS 25.430		UTRAN Iub Interface General Aspects and Principles			RAN #1415	
TS 25.432		UTRAN Iub interface signalling transport			RAN #1415	
TS 25.433		UTRAN Iub Interface NBAP Signalling			RAN #1415	
TS 25.434		UTRAN Iub interface data transport & transport signalling for CCH data streams			RAN #1415	
TS 25.435		UTRAN Iub interface user plane protocols for CCH data streams			RAN #1415	
TS 25.442		UTRAN Implementation Specific O&M Transport			RAN #1415	

The expected finalisation date is TSG-RAN #1415

11 Work item rapporteurs

Mike Diesen, Motorola

12 Work item leadership

13 Supporting Companies

Motorola, Nokia, Ericsson, Vodafone Group, Mannesmann Mobilfunk

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

High Speed Downlink Packet Access (HSDPA)

14c The WI is a Work Task: parent Building Block

47. High Speed Downlink Packet Access (HSDPA) - RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

Last distributed as: RAN_Work_Items_after_RAN_13 (originally RP-010262)

Work Item Description

Title

High Speed Downlink Packet Access - RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

- HSDPA Physical Layer
- HSDPA Layer 2 and 3 Protocol Aspects
- HSDPA UTRAN Iub/Iur Protocol Aspects

3 Justification

The study item on HSDPA was concluded in RAN WG#11 with recommendations on the techniques to be included in Rel-5. This work item supports the specifications of the various RF characteristics of the HSDPA feature as they impact the base station and mobile station performance and the radio resource management aspects.

4 Objective

The technical objective of this work item is the description of the HSDPA characteristics, the system performance requirements and conformance testing.

- For radio transmission and reception:
 - UE radio transmission and reception
 - BTS radio transmission and reception
 - BTS Conformance testing
 - Requirements for support of Radio Resource Management

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
25.101		UE Radio Transmission and Reception (FDD)			RAN#1516	
25.102		UE Radio Transmission and Reception (TDD)			RAN#1516	
25.104		UTRA (BS) FDD; Radio transmission and Reception			RAN#1516	
25.105		UTRA (BS) TDD; Radio transmission and Reception			RAN#1516	
25.123		Requirements for support of Radio Resource Management (TDD)			RAN#1516	
25.133		Requirements for support of Radio Resource Management (FDD)			RAN#1516	
25.141		Base station conformance testing(FDD)			RAN#1516	
25.142		Base station conformance testing(TDD)			RAN#1516	

The expected finalisation date is TSG-RAN #1516

11 Work item raporteurs

Howard Benn (Motorola)

12 Work item leadership

TSG-RAN WG4

13 Supporting Companies

Motorola, Nokia, Ericsson, Vodafone Group, Mannesmann Mobilfunk

14 Classification of the WI (if known)

X	Feature (go to 14a)
	Building Block (go to 14b)
	Work Task (go to 14c)

14b The WI is a Building Block: parent Feature
High Speed Downlink Packet Access (HSDPA)

48. Multiple Input Multiple Output antennas (MIMO)

Last distributed as: RP-010267

Work Item Description

Title

Multiple Input Multiple Output antennas (MIMO)

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

High Speed Downlink Packet Access

3 Justification

Within the HSDPA study item, it has been agreed that MIMO offers significant performance gains with acceptable impact to both UE and UTRAN. MIMO shall be optional at the UE.

4 Objective

The purpose of this work item is to improve the downlink performance by means of multiple antennas at both UE and UTRAN.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
		WG1			RAN#1815	
Affected existing specifications						
Spec No.	CR	Subject	Approved at plenary#		Comments	
25.211		Physical channels and mapping of transport channels onto physical channels (FDD)	RAN #1518			
25.212		Multiplexing and channel coding (FDD)	RAN #1518			
25.213		Spreading and modulation (FDD)	RAN #1518			
25.214		FDD : Physical layer procedures	RAN #1518			
25.215		Physical layer measurements (FDD)	RAN #1518			
25.331		Radio Resource Control (RRC) Protocol Specification	RAN #1518			

11 Work item rapporteurs

Howard Huang (hchuang@lucent.com)

12 Work item leadership

TSG RAN WG1

13 Supporting Companies

Lucent Technologies, Panasonic, Golden Bridge Technologies, NTT DoCoMo.

14 Classification of the WI (if known)

Feature (go to 14a)

	Building Block (go to 14b)
X	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

14c The WI is a Work Task: parent Building Block

This is a work task - part of the HSDPA building block.

51. Enhancement on the DSCH hard split mode

Last distributed as: RP-010469

Work Item Description

Title

Enhancement on the DSCH hard split mode

1 **3GPP Work Area**

X	Radio Access
	Core Network
	Services

2 **Linked work items**

none

3 **Justification**

1) It was identified by RAN WG's (WG1, WG2 and WG3) that in the current Rel99 specification, logical split cannot be supported over Iur during the DSCH soft handover if DSCH scheduling should be done in DRNC. Furthermore, hard split has advantage over logical split in the sense that it can be supported over Iur. However, it was also identified that hard split has some limitation and therefore there is some need to study the enhancement for TFCI coding in the DSCH hard split mode

2) And also, it was identified by RAN WG1, that in the current Rel99 specification, TFCI2 (TFCI for DSCH) is not transmitted from all the cells in the active set when the UE is in soft handover. Furthermore, in the current specification, the power offset should be set high enough to always detect TFCI bits reliably even if UE is not in soft handover.

4 **Objective**

The purpose of this work item is to specify the enhancements of TFCI coding and power control in DSCH hard split mode for UTRA FDD. This work item is composed of two work tasks.

1) TFCI coding in DSCH hard split mode

Currently DSCH hard split mode can support only 5 bit long DSCH and DCH TFCIs. As a result, the number of TFCI is limited upto 32 for DCH and DSCH in DSCH hard split mode. A new TFCI coding scheme to support the variable bit length can enhance the DSCH hard split mode.

2) TFCI power control in DSCH hard split mode

Currently the reliability of TFCI cannot be guaranteed when the UE is in soft handover. As well, in the current specification, the power offset should be set high enough to always detect TFCI bits reliably even if UE is not in soft handover. New power control scheme for TFCI can enhance the DSCH hard split mode.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TR 25.870				RAN # 13	RAN # 14	
Affected existing specifications						
Spec No.	CR	Subject	Approved at plenary#		Comments	
25.212		Multiplexing and channel coding (FDD)	RAN #1415			
25.214		Physical Layer Procedure (FDD)	RAN #1415			
25.331		RRC Protocol Specification	RAN #1415			
25.423		UTRAN Iur Interface RNSAP Signalling	RAN #1415			
25.433		UTRAN Iub Interface NBAP Signalling	RAN #1415			

11 Work item raporteurs

Jaeyoel KIM, SAMSUNG Electronics. kimjy@samsung.com

12 Work item leadership

TSG-RAN WG1

13 Supporting Companies

TSG-RAN

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature

This is a building block part of the radio interface improvement feature.

14c The WI is a Work Task: parent Building Block

Work Task 1:TFCI coding in DSCH hard split mode

Work Task 2 :TFCI power control in DSCH hard split mode

52. NodeB Synchronisation for 1.28 Mcps TDD

Last distributed as: RAN_Work_Items_after_RAN_13 (originally RP-010216)

Work Item Description

Title

NodeB Synchronisation for 1.28 Mcps TDD

1 **3GPP Work Area**

X	Radio Access
	Core Network
	Services

2 **Linked work items**

none

3 **Justification**

NodeB synchronisation is beneficial in UTRA TDD to minimise cross-interference in neighbouring cells. Currently, for the 1.28 Mcps TDD option no method has been specified how NodeB synchronisation can be achieved with UTRAN's and UE's internal means such as signalling via the air interface.

The following benefits of the introduction of NodeB synchronisation by internal means are seen:

- A substantial reduction of the cost of the transmission network.
- An autonomous synchronisation procedure without the need of external references.
- An easily extendable method for the purpose of inter-system NodeB synchronisation.

4 **Objective**

The purpose of this new work item is to enable the synchronisation of NodeBs in UTRA TDD for the 1.28 Mcps option by UTRAN's and UE's internal means such as air interface signals and NodeB cross measurements. NodeB synchronisation involves

- radio frame and multi frame synchronisation and
- intra-system and inter-system synchronisation.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
25.868	NodeB synchronisation for 1.28 Mcps TDD	WG1		RAN # 14	RAN # 15	
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#	Comments	
25.123		Requirements for Support of Radio Resource Management (TDD)		RAN # 1415		
25.221		Physical channels and mapping of transport channels onto physical channels (TDD)		RAN # 1415		
25.223		Spreading and modulation (TDD)		RAN # 1415		
25.224		Physical Layer Procedures (TDD)		RAN # 1415		
25.225		Physical layer – Measurements (TDD)		RAN # 1415		
25.302		Services provided by the physical layer		RAN # 1415		
25.331		RRC Protocol Specification		RAN # 1415		
25.402		Synchronisation in UTRAN Stage 2		RAN # 1415		
25.433		UTRAN Iub Interface NBAP Signalling		RAN # 1415		
25.423		UTRAN Iur Interface RNSAP Signalling		RAN # 1415		

11 Work item rapporteurs

12 Work item leadership

TSG-RAN WG1

13 Supporting Companies

CATT, China Mobile, Huawei, Motorola, Nortel Networks, Samsung, Siemens

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14b The WI is a Building Block: parent Feature
Radio Interface Improvements and RAN Improvements Features

61. Beamforming

Last distributed as: RP-010711

Work Item Description

Title

Beamforming

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

Beamforming with dedicated pilot symbols or with S-CPICH has potential to improve system capacity. Also UTRAN RRM could be improved by defining support for measurements that take into account the possible use of beamforming with S-CPICH or with dedicated pilots only.

4 Objective

This work item should define the Rel'5 performance requirements and potential new measurements for efficient support of beamforming in UTRAN. The work also covers necessary corrections for Rel'99/Rel'4 specifications for the physical layer procedures to enable support of the beamforming operation.

5 Service Aspects

None/Text

6 MMI-Aspects

None/Text

7 Charging Aspects

None/Text

8 Security Aspects

None/Text

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
New TR	Beamforming Concept Clarification	TSG RAN WG1	TSG RAN WG4	TSG RAN#14	TSG RAN#15	
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
TS 25.214					TSG RAN#1615	
TS 25.133					TSG RAN#1615	
TS 25.101					TSG RAN#1615	
TS 25.433					TSG RAN#1615	
TS 34.121					TSG T#1516	
TS 25.215					TSG RAN#1615	

Note: CRs correcting Release 99 for 25.214 shall be provided for TSG RAN as soon as completed by TSG RAN WG1.

11 Work item raporteurs

Jussi Kähtävä, Nokia.

12 Work item leadership

TSG-RAN WG1

13 Supporting Companies

Nokia, Motorola, Panasonic, Qualcomm

14 Classification of the WI (if known)

	Feature (go to 14a)
	Building Block (go to 14b)
X	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

14c The WI is a Work Task: parent Building Block

UTRAN Improvement Feature