Source: **TSG-RAN**

Title: **Work Item sheets - latest situation**

This document contains WI sheets in TSG-RAN (latest situation) for all approved Work Items. Those of the approved study items are provided in a separate document, RAN_Study_Items. The WI sheets for finished WIs can be found in RAN_Work_Items_History (this is mentioned under the header of all relevant WIs).

See RP-010281 (draft minutes of TSG-RAN #11 meeting) for comments on the sheets provided in yellow.

Sheets in green have been re-issued where necessary and (if indeed based on the comments in RP-010281) should be considered endorsed.

For the approved Work Items in red, there is not yet a WI sheet.

WI sheets in blue are new or have changed since TSG-RAN #11 (other than because of comments at TSG-RAN #11) and also need to be endorsed.

The approved Work Items at the end of TSG-RAN #11 are:

1. Low chip rate TDD option
2. Base station classification
3. FDD Base station classification
4. TDD Base station classification
5. UE positioning in UTRA TDD (replaced by 34. and 35.)
6. UE positioning in UTRA FDD (replaced by 34. and 35.)
7. Hybrid ARQ II/III
8. NodeB Synchronisation for TDD
9. UTRA FDD Repeater Specification
10. QoS optimization for AAL type 2 connections over Iub and Iur interfaces
11. Terminal power saving features
12. PS-Domain handover for real-time services
13. RAB Quality of Service Negotiation/Renegotiation over Iu
14. RRM optimizations for Iur and Iub
15. Radio access bearer support enhancement
16. Improvement of inter-frequency and inter-system measurements
17. Improved usage of downlink resource in FDD for CCTrCHs of dedicated type
18. IP Transport in UTRAN
19. Transcoder Free Operations in UTRAN
20. Evolution of the transport in the UTRAN
21. Radio Interface Improvement Feature
22. RAN Improvement Feature
23. UE Positioning
24. Void (originally Radio Interface Testing)
25. Void (originally Requirement on Equipment)
26. Low Chip Rate TDD Physical Layer
27. Low chip rate TDD layer 2 and layer 3 protocol aspects
28. Low Chip Rate TDD RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing
29. Void (originally Smart antenna)
30. Low Chip Rate TDD UE radio access Capability
31. Low chip rate TDD UTRAN network Iub/Iur protocol aspects
32. RAB Quality of Service Negotiation over Iu
33. RAB Quality of Service Renegotiation over Iu
34. Iub/Iur interfaces for UE positioning methods supported on the radio interface release 99
35. UE positioning enhancements
36. RAN Technical Small Enhancements and Improvements
37. DSCH power control improvement in soft handover
38. Transport bearer modification procedure on Iub, Iur and Iu (originally Migration to Modification procedure)
39. UMTS 1800
40. RAN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes
41. RAB Quality of Service Negotiation over Iu during relocation
42. Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning
43. High Speed Downlink Packet Access (HSDPA)
44. High Speed Downlink Packet Access (HSDPA) - *Physical Layer*
45. High Speed Downlink Packet Access (HSDPA) - *layer 2 and 3 aspects*

46. High Speed Downlink Packet Access (HSDPA) - *Iub/Iur Protocol Aspects*
47. High Speed Downlink Packet Access (HSDPA) - *RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing*
48. Multiple Input Multiple Output antennas (MIMO)
49. Gated DPCCH Transmission
50. UMTS 1900
51. Enhancement on the DSCH hard split mode
52. NodeB Synchronisation for 1.28 Mcps TDD
53. RL Timing Adjustment
54. Separation of resource reservation and radio link activation
55. Traffic Termination Point Swapping
56. Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods
57. UE positioning enhancements for 1.28 Mcps TDD

Relation between Work Items

Feature	Grp	Building Block	Grp	Work Task	Grp
22. RAN Improvement Feature	RP	14. RRM optimizations for Iur and Iub	R3		
		8. NodeB Synchronisation for TDD	R1		
		52. NodeB Synchronisation for 1.28 Mcps TDD	R1		
		15. Radio access bearer support enhancement	R2		
		53. RL Timing Adjustment	R3		
		54. Separation of resource reservation and radio link activation	R3		
		55. Traffic Termination Point Swapping	R3		
21. Radio Interface Improvement Feature	RP	16. Improvement of inter-frequency and inter-system measurements	R1		
		2. Base station classification	R4	3. FDD Base station classification	R4
				4. TDD Base station classification	R4
		7. Hybrid ARQ II/III	R2		
		17. Improved usage of downlink resource in FDD for CCTrCHs of dedicated type	R2		
		11. Terminal power saving features	R1		
		49. Gated DPCCH Transmission	R1		
		9. UTRA FDD Repeater Specification	R4		
		37. DSCH power control improvement in soft handover	R1		
		39. UMTS 1800	R4		
		50. UMTS 1900	R4		
		48. Multiple Input Multiple Output antennas (MIMO)	R1		
		51. Enhancement on the DSCH hard split mode	R1		
20. Evolution of the transport in the UTRAN	RP	18. IP transport in UTRAN	R3		
		10. QoS optimization for AAL type 2 connections over Iub and Iur interfaces	R3		
		38. Transport bearer modification procedure on Iub, Iur, and Iu (originally Migration to Modification procedure)	R3		
1. Low chip rate TDD option	R1	26. Low chip rate TDD physical layer	R1		
		27. Low chip rate TDD layer 2 and layer 3 protocol aspects	R2		
		30. Low Chip Rate TDD UE radio access Capability	R2		
		31. Low chip rate TDD UTRAN network Iub/Iur protocol aspects	R3		
		28. Low Chip Rate TDD RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing	R4		
43. High Speed Downlink Packet Access (HSDPA)	R2	44. High Speed Downlink Packet Access (HSDPA) - Physical Layer	R1		
		45. High Speed Downlink Packet Access (HSDPA) - layer 2 and 3 aspects	R2		
		46. High Speed Downlink Packet Access (HSDPA) - Iub/Iur Protocol Aspects	R3		
		47. High Speed Downlink Packet Access (HSDPA) - RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing	R4		
36. RAN Technical Small Enhancements and Improvements	RP				
Transcoder-Free Operation	N4	OoBTC solution	N4	19. Transcoder Free Operations in UTRAN	R3

Feature	Grp	Building Block	Grp	Work Task	Grp
Location Services enhancements	S2	23. UE Positioning	RP	34. Iub/Iur interfaces for UE positioning methods supported on the radio interface release 99	R3
				35. UE positioning enhancements	R2
				57. UE positioning enhancements for 1.28 Mcps TDD	R2
				9. UTRA FDD Repeater Specification	R4
				42. Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning	R2
				56. Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods	R2
Ensure reliable QoS for PS domain	S2	13. RAB Quality of Service Negotiation/Renegotiation over Iu	R3	32. RAB Quality of Service Negotiation over Iu	R3
				33. RAB Quality of Service Renegotiation over Iu	R3
				41. RAB Quality of Service Negotiation over Iu during relocation	R3
		12. PS-Domain handover for real-time services	R3		
Intra Domain Connection of RAN Nodes to Multiple CN Nodes	S2	40. RAN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes	R3		

1. Low chip rate TDD option

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000191)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

2. Base station classification

Last distributed as: RAN_Work_Items_after_RAN_11 (originally RP-000186)

Work Item Description

Title

Base station classification

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

This work item proposes a building block for new base station classifications

4 Objective

This is the parent building block for the TDD and FDD basestation classification work tasks. Technical details for the work tasks can be found in TDoc RP-000132, and RP-000183

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		
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
		R4		RAN #13	RAN #13	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments

11 Work item raporteurs

Antti Toskala, Nokia

12 Work item leadership

TSG-RAN WG4

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)

14b The WI is a Building Block: parent Feature – Radio Interface Improvement

3. FDD Base station classification

Last distributed as: RAN_Work_Items_after_RAN_11 (originally RP-000183)

Work Item Description

Title

FDD Base Station Classification

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

none

3 Justification

Current TSG RAN WG4 specifications have been done according to the requirements for the macrocell base stations (NodeBs). For the UTRA evolution requirements specific for other type of base stations are needed as well (e.g. micro, pico)

4 Objective

- definition of base station classes according to deployment scenarios (e.g. macro, micro, pico)
- identification, review and possible update of radio parameters dependent on deployment scenarios
- identification, review and possible update of UTRAN (Node B) measurement requirements and conformance where the maximum base station output power is reflected, dependent on deployment scenarios
- review and possible update of conformance test specifications
- recording of related information into RF System Scenarios

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		
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
25.951	FDD Base station classification	R4		RAN #13	RAN #13	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.104		UTRA (BS) FDD, Radio Transmission and Reception	RAN #13	
25.141		Base Station Conformance Testing (FDD)	RAN #13	
25.133		Requirements for Support of Radio Resource Management (FDD)	RAN #13	?
25.942		RF System Scenarios	RAN #13	

11 Work item raporteurs

Antti Toskala, Nokia Networks

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

(one Work Item identified as a feature)

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

(one Work Item identified as a building block)

4. TDD Base station classification

Last distributed as: RAN_Work_Items_after_RAN_11 (originally RP-000185)

Work Item Description

Title

TDD Base Station Classification

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

none

3 Justification

Current TSG RAN WG4 specifications have been done according to the requirements for the macrocell base stations (NodeBs). For the UTRA evolution requirements specific for other type of base stations are needed as well (e.g. micro, pico)

4 Objective

- definition of base station classes according to deployment scenarios (e.g. macro, micro, pico)
- identification, review and possible update of radio parameters dependent on deployment scenarios
- identification, review and possible update of UTRAN (Node B) measurement requirements and conformance where the maximum base station output power is reflected, dependent on deployment scenarios
- review and possible update of conformance test specifications
- recording of related information into RF System Scenarios

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		
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
25.952	TDD Base station classification	R4		RAN #12	RAN #12	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.105		UTRA (BS) TDD, Radio Transmission and Reception	RAN #12	
25.142		Base Station Conformance Testing (TDD)	RAN #12	
25.123		RF parameters in support of RRM (TDD)	RAN #12	?
25.942		RF System Scenarios	RAN #12	

11 Work item raporteurs

Antti Toskala, Nokia Networks

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

(one Work Item identified as a feature)

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

(one Work Item identified as a building block)

5. UE positioning in UTRA TDD

Last distributed as: (originally RP-000053)

This WI and WI 6. were replaced by WIs 34. and 35. in TSG-RAN #9.

6. UE positioning in UTRA FDD

Last distributed as: (originally RP-000135)

This WI and WI 5. were replaced by WIs 34. and 35. in TSG-RAN #9.

7. Hybrid ARQ II/III

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000054)

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 rsp. WG	2ndary rsp. 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 raporteurs

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)

8. NodeB Synchronisation for TDD

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000055)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

9. UTRA FDD Repeater Specification

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000083)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

10. QoS optimization for AAL type 2 connections over Iub and Iur interfaces

Last distributed as: Revised WI sheet (QoS) (originally RP-000188)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

11. Terminal power saving features

Last distributed as: RAN_Work_Items_after_RAN_10 (originally RP-000189)
NOTE: The contents of the WI sheet need to be revised for TSG-RAN #12 plenary based on review by WG1, WG2 and WG3 during their joint meetings in May 2001.

Work Item Description

Title

Terminal power saving features

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

The UE battery saving, UL/DL interference reduction, and capacity increase are important for deploying the UMTS services. The gated DPCCH transmission can be one of the solutions.

4 Objective

Improving the terminal power saving features, UL/DL interference reduction, and capacity increase.

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		×	×		
No	×			×	×
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
25.840		WG1		RAN #10	RAN #11	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.214			RAN #11	
25.301			RAN #11	
25.302			RAN #11	
25.331			RAN #11	
25.101			RAN #11	
25.423			RAN #11	
25.433			RAN #11	

11 Work item raporteurs

Ju Ho Lee, Samsung (juholee@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)

14b The WI is a Building Block: parent Feature is "Radio Interface improvement"

12. PS-Domain handover for real-time services

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000127)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

13. RAB Quality of Service Negotiation/Renegotiation over Iu

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000137, major revision RP-000498, rest in WI 32. RAB Quality of Service Negotiation)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

14. RRM optimizations for Iur and Iub

Last distributed as: RP-010273 (originally RP-000310)

Work Item Description

Title

RRM optimizations for Iur and Iub

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

3 Justification

Optimising the existing procedures will increase the efficiency of UTRAN and the quality of service to the end user.

4 Objective

This work item focuses on optimizing the existing procedures and functions of Iub and Iur.

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	2nd ary 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 finalization date is RAN#14.

11 Work item raporteurs

Gert-Jan van Lieshout (Ericsson)

12 Work item leadership

TSG-RAN WG3

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

Radio Interface Improvement feature and UTRAN Improvement feature

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

15. Radio access bearer support enhancement

Last distributed as: RAN_Work_Items_after_RAN_11 (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 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

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 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
					RAN#14	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments

11 Work item raporteurs

TSG-RAN WG2: Ainkaran Krishnarajah (Ericsson)
TSG-RAN WG3: Martin Israelsson (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)

16. Improvement of inter-frequency and inter-system measurements

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000180)

Work Item Description

Title

Improvement of inter-frequency and inter-system measurements

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

none

3 Justification

Compressed mode in Release-99 covers limited set of methods of implementing the compressed mode for enabling measurements on other frequencies. There have been methods suggested that potentially improve the system capacity and operational flexibility in addition to the existing methods.

- The following two technologies have been identified as candidates for Release 2000 for compressed mode improvements:

1. Compressed mode with puncturing and flexible positions
2. Combination of the existing methods (including method in point 1)

4 Objective

The purpose of this work item is to work on the compressed mode improvements for improved system performance.

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 endorsement at plenary#	Approved at plenary#	Comments

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.212		Multiplexing and channel coding (FDD)	RAN #14	
25.215		Physical layer – Measurements (FDD)	RAN #14	
25.331		RRC Protocol Specification	RAN #14	Parameter update
25.423		UTRAN Iur Interface RNSAP Signalling	RAN #14	Parameter update
25.433		UTRAN Iub Interface NBAP Signalling	RAN #14	Parameter update

11 Work item raporteurs

Antti Toskala, Nokia Networks

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 sub-building block part of the radio interface improvement building block.

(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)

17. Improved usage of downlink resource in FDD for CCTrCHs of dedicated type

Last distributed as: RAN_Work_Items_after_RAN_10 (originally RP-000169)

Work Item Description

Title

Improved usage of downlink resource in FDD for CCTrCHs of dedicated type

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

In the RAN 1 specifications, one CCtrCH of dedicated type may be mapped onto several physical channels (channelisation codes). However these codes must have the same spreading factor in order to have an equal physical channel segmentation. In order to have some flexibility in the resource allocation in downlink, the possibility to have multiple CCtrCHs of dedicated type was introduced in the RAN 1 specifications for R99. This allows to have codes with different spreading factors and distribute transport channels onto separate CCtrCHs taking into account possibly very different QoS requirements, which results in some cases in a smaller amount of allocated resource. RAN 2 and RAN 3 specifications do not support multiple CCTrCHs of dedicated types in R99, limiting hence the flexibility on resource allocation.

4 Objective

Introduction of the possibility to map transport channels belonging to a radio link onto multiple codes with different spreading factors as a way to minimise the overall amount of allocated resource, while fulfilling possibly very different QoS requirements for each of the transport channels,

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 endorsement at plenary	Approved at plenary	Comments

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary	Comments
25.331			RAN #13	
25.423			RAN #13	
25.433			RAN #13	
25.212			RAN #13	?
25.214			RAN #13	
25.926			RAN #13	

11 Work item raporteurs

Claudiu Mihailescu (Nortel Networks)

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 improvement feature

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

(one Work Item identified as a building block)

18. IP transport in UTRAN

Last distributed as: RAN_Work_Items_after_RAN_9

Work Item Description

Title

IP-transport in UTRAN

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

Release 2000 workplan includes, as an option, an all-IP transport architecture aimed at allowing operators to deploy IP technology to deliver 3rd generation services.

The foreseen benefits of the introduction of IP as transport technology inside the UTRAN are:

- To give the operator the option to use IP transport as an alternative to AAL2/ATM transport within UTRAN.
- In which networks, or parts of network, the IP option is beneficial over the AAL2/ATM option will vary between different operators, e.g. depending on existing transport network infrastructure, other applications using the same transport, available physical links, etc.
- A consistent approach allowing for end-to-end IP transport solutions.
- The more detailed requirements and expected benefits will be documented in the Technical Report.

4 Objective

The purpose of this new work task is to enable the usage of IP technology for the transport of signalling and user data over Iu, Iur and Iub in the UTRAN. This work task is only related to the transport aspects.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

Security aspects linked with the use of IP as transport technology.

9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes			X	X[1]	
No	X	X			
Don't know					

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

The first step of the work will consist in providing the necessary changes to the generic specifications (TS 25.401, TS 25.402). Then, the CRs to the other specs introducing the possibility to use IP as a transport mechanism will be generated.
The QOS aspects should be studied closely with IETF.

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
TR 25.933	IP Transport in UTRAN Work Task Technical Report	WG3		RAN #10	RAN #11	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
TS 25.401		UTRAN Overall Description	RAN #11	Only text related to Transport Network Layer.
TS 25.402		Synchronisation in UTRAN, Stage 2	RAN #11	To be confirmed during the study
TS 25.410		UTRAN Iu Interface: General Aspects and Principles	RAN #11	Only text related to Transport Network Layer.
TS 25.411		UTRAN Iu Interface Layer 1	RAN #11	
TS 25.412		UTRAN Iu interface signalling transport	RAN #11	
TS 25.413		UTRAN Iu Interface RANAP Signalling	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.414		UTRAN Iu interface data transport & transport signalling	RAN #11	
TS 25.415		UTRAN Iu interface user plane protocols	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.420		UTRAN Iur Interface: General Aspects and Principles	RAN #11	Only text related to Transport Network Layer.
TS 25.422		UTRAN Iur interface signalling transport	RAN #11	
TS 25.423		UTRAN Iur Interface RNSAP Signalling	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.424		UTRAN Iur interface data transport & transport signalling for CCH data streams	RAN #11	
TS 25.425		UTRAN Iur interface user plane protocols for CCH data streams	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.426		UTRAN I_{ur} and I_{ub} Interface Data Transport & Transport Signalling for DCH Data Streams	RAN #11	
TS 25.430		UTRAN I_{ub} Interface General Aspects and Principles	RAN #11	Only text related to Transport Network Layer.
TS 25.432		UTRAN Iub interface signalling transport	RAN #11	
TS 25.433		UTRAN Iub Interface NBAP Signalling	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.434		UTRAN Iub interface data transport & transport signalling for CCH data streams	RAN #11	

[1] None of the TSG-CN specifications are impacted.

TS 25.435		UTRAN Iub interface user plane protocols for CCH data streams	RAN #11	Only parameters and interface related to the Transport Network Layer.
TS 25.442		UTRAN Implementation Specific O&M Transport	RAN #11	
TR 25.931		UTRAN Functions, Examples on Signalling Procedures	RAN #11	Only messages related to transport bearers.
TR 25.932		Delay Budget within the Access Stratum	RAN #11	

11 Work item rapporteurs

Nicolas Drevon, Alcatel

12 Work item leadership

TSG-RAN WG3

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

(one Work Item identified as a feature)

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

Parent Building Block is "Evolution of the Transport in the UTRAN".

19. Transcoder Free Operations in UTRAN

Last distributed as: RAN_Work_Items_after_RAN_10 (originally RP-000507)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

20. Evolution of the transport in the UTRAN

Last distributed as: RAN_Work_Items_after_RAN_9 (originally WI-EVUTRAN)

Work Item Description

Title: Evolution of the transport in the UTRAN

This work item intends to introduce mechanism necessary to allow an evolutuon of transport mechanism in the RNS following requirement put by the core network.

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

In order to cope with new requirement coming from new service definition, it is necessary to introduce mechanism to support new transport mechanisms or to improve the existing ones. Typical examples of such mechanisms are the following: introduction of an IP transport inside the RNS and AAL2 QoS optimisation

4 Objective

The main objective for this building block is to ensure that adequate mechanism are provided to handle the different type of traffic (i.e. signalling and user flow) inside the RNS to ensure that requirements in terms of QoS and delay are taken into account.

This shall be valid also for efficient O&M transport of the different interfaces inside the RNS. This includes the Iub, Iur and any protocol suites at the Iu reference point.

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 (1)	
No					
Don't know					

Note 1: **This cross indicates that as soon as there is an impact on the Iu supported protocol this also touch upon the Access stratum part situated in the Core network**

10 **Expected Output and Time scale (to be updated at each plenary)**
(to be defined on a per WT basis but all specifications 25 4x2 and 254x4)

11 **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 endorsement at plenary#	Approved at plenary#	Comments

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments

11 **Work item raporteurs**

Francois Courau (Alcatel)

12 **Work item leadership**

TSG-RAN WG3

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

Not Relevant

14b The WI is a Building Block: parent Feature

Evolution of Transport

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

Not Relevant

21. Radio Interface Improvement Feature

Last distributed as: WI-Radio-if-improve2

Work Item Description

Title: Radio Interface Improvement

This work item intends to introduce new mechanisms allowing improvements on the way the Radio Interface is used.

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

In order to cope with new techniques providing more efficient use of the bandwidth for the radio interface, it is necessary to ensure backward compatibility in terms of service offering.
When a new system is designed it is quite normal that some work is required also to enhance the already defined mechanism at the physical layer as well as at the signalling level. Thus this work item will cope with technical enhancement and improvement for the Radio path.

4 Objective

The main objective for this feature is to ensure that adequate mechanisms are provided to allow enhancement of the radio interface in a backward compatible manner.

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					

12 Expected Output and Time scale
(to be defined on a per building block basis but potentially all specifications and report of the 25 series)

13 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

11 Work item raporteurs

TSG-RAN

12 Work item leadership

TSG-RAN

13 Supporting Companies

Alcatel, …

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

Not Relevant

14b The WI is a Building Block: parent Feature

Not Relevant

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

Not Relevant

22. RAN Improvement Feature

Last distributed as: WI-RAN-improve2

Work Item Description

Title: RAN Improvement

This work item intends to introduce new mechanisms allowing improvements on all aspects dealing with the RNS internal interfaces as well as the interface towards the core network. In addition this includes internal mechanisms to be introduced in the Technical Specification under responsibility of TSG RAN for the RNS part of the network, e.g., algorithms for QoS handling.

1 3GPP Work Area

X	Radio Access
X	Core Network
	Services

2 Linked work items

None

3 Justification

This work item has been created to collect all evolutions of the Radio Network System. This includes transport of user and signalling plane as well as protocols over all interfaces of the RNS. The Iu and Iur reference points are also covered by this Feature description.

4 Objective

The main objective of this Feature is to cover all evolution of the internal RNS architecture and protocol.

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					

14 Expected Output and Time scale (to be updated at each plenary)
(to be defined on a per Building block or WT basis but this may impact most of the specifications 25 .4 series and some of the 25.3 series)

15 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

11 Work item raporteurs

TSG-RAN

12 Work item leadership

TSG-RAN

13 Supporting Companies

Alcatel, …

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

Not Relevant

14b The WI is a Building Block: parent Feature

Not Relevant

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

Not Relevant

23. UE Positioning

Last distributed as: UE_positioning.doc

Work Item Description

1. Title

UE positioning

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

- Location Based Services (LCS)
- Low Chip rate TDD option

3 Justification

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

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

4 Objective

UE positioning is a feature that allows:

- UTRAN to calculate the geographical co-ordinates of a UE known by UTRAN
- UTRAN to provide sufficient information so that capable UEs can calculate autonomously their geographical co-ordinates
- UTRAN to answer to Core Networks requests for UE position

UE positioning feature encompasses a collection of positioning methods, allowing different level of accuracy and operational scenarios.

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)

This is a feature which is supported in release 99. For output and timescales, refer to the appropriate building block under the feature.

11 Work item rapporteur

Denis Fauconnier, Nortel Networks

12 Work item leadership

TSG-RAN WG2

13 Supporting Companies

TSG-RAN

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

- UE positioning enhancements
- Iub/Iur interfaces for UE positioning methods supported on the radio interface release 99

14b The WI is a Building Block: parent Feature

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

24. Void (Radio Interface Testing)

Last distributed as: -

This Work Item was deleted from the approved Work Items at TSG-RAN #9

25. Void (Requirement on Equipment)

Last distributed as: -

This Work Item was deleted from the approved Work Items at TSG-RAN #10

26. Low chip rate TDD physical layer

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000311)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

27. Low chip rate TDD layer 2 and layer 3 protocol aspects

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000312)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

28. Low Chip Rate TDD RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000313)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

29. Void (Smart antenna)

Last distributed as: -(originally RP-000314)

This Work Item was deleted from the approved Work Items at TSG-RAN #10

30. Low Chip Rate TDD UE radio access Capability

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000315)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

31. Low chip rate TDD UTRAN network Iub/Iur protocol aspects

Last distributed as: Revised WI sheet (LCRTDD-IubIur) (originally RP-000316)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

32. RAB Quality of Service Negotiation over Iu

Last distributed as: RAN_Work_Items_after_RAN_9 (originally partly in RP-000137, revised in RP-000499)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

33. RAB Quality of Service Renegotiation over Iu

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000500)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

34. Iub/Iur interfaces for UE positioning methods supported on the radio interface release 99

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000509)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

35. UE positioning enhancements

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000509)

Work Item Description

2. 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)

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

36. RAN Technical Small Enhancements and Improvements

Last distributed as: - (originally in RP-000468 as R4-000729)

This WI was replaced by a general WI for all TSGs established during TSG-SA #10 in Bangkok. No WI sheet was needed.

37. DSCH power control improvement in soft handover

Last distributed as: RAN_Work_Items_after_RAN_9 (originally RP-000442)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

38. Transport bearer modification procedure on Iub, Iur, and Iu (originally Migration to Modification procedure)

Last distributed as: Revised WI sheet (Mod) (originally RP-000446)

This WI was finished in TSG-RAN #11. The WI sheet can be found in RAN_Work_Items_History.

39. UMTS 1800

Last distributed as: RAN_Work_Items_after_RAN_11 (originally RP-000448)

Work Item Description

Title

UMTS 1800

1 3GPP Work Area

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	3/2001
Submission of RAN WG4 specifications to TSG RAN for approval		3/2001
Possible remaining corrections, clarifications and test specifications	12/2000	03/2001

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 #12	
25.104		UTRA (BS) FDD; Radio transmission and reception	RAN #12	
25.141		Base station conformance testing (FDD)	RAN #12	
34.121		Terminal Conformance Specification, Radio Transmission and Reception	T #12	

11 Work item raporteurs

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

40. RAN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes

Last distributed as: RP-000689
NOTE: The contents of the WI sheet need to be revised for TSG-RAN #12 plenary based on review by WG3.

Work Item Description

Title

RAN work for
Intra Domain Connection of RAN Nodes to Multiple CN Nodes

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

F1 Intra Domain Connection of RAN Nodes to Multiple CN Nodes: Overall System Architecture
SA 2 is responsible for this.

BB3 GERAN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes
[GERAN 2 is predicted to lead the work in GERAN]

BB4 CN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes
[CN 1 is predicted to lead the work in CN]

3 Justification

In the current network architecture, an RNC can only be connected to one MSC and/or one SGSN. The same restriction applies to BSCs. This has the following consequences:

a) when a BSC (or RNC) has a relatively large capacity compared to that of an MSC/SGSN there are frequently significant wastages of hardware. (For example, if a BSC has 40% of the capacity of an MSC, do you connect 2 or 3 BSCs to that MSC?)

b) as networks carry more traffic, the geographic area covered by one MSC or SGSN (of a given capacity) decreases. However, subscribers still tend to travel the same physical distances and therefore there are more inter-MSC/SGSN registration updates. The signalling associated with these inter MSC/SGSN updates causes additional load on MSCs, SGSNs, HLRs, the core network signalling networks and on the radio interface signalling channels.

The ability to connect RNCs and BSCs to more than one MSC and to more than one SGSN could reduce the above problems. In addition, the ability to provide load sharing between MSCs (SGSNs) would further improve the efficiency of hardware utilisation.

This work will focus on a solution where a routeing function is placed in the RNC (or BSC). This avoids most of the problems of a standalone node (TR 23.913 called it the Turbo Routeing Function), while retaining the other advantages of described in R'99, TR 23.913.

This Work Item (which is a Feature) proposes to provide a standardised mechanism for the connection of multiple MSCs (and SGSNs) to an RNC or a BSC (both A/Gb mode and Iu mode)

which reduces mobility management signalling and permits improved efficiency in hardware utilisation.

It is intended that this new concept is an architectural option for any PLMN. Its deployment, or non-deployment, by one network operator should not place requirements on other network operators.

4 Objective

The objective of this Work Item is to produce the necessary updates to the RAN TSs.

The list of affected existing specifications is given in section 10.

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	2nd ary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.331		Inclusion of NAS routeing parameter in Initial Direct Transfer message.		
25.401		RAN architecture description		
25.413		Addition of "current MSC/SGSN load" message to RANAP		

11 Work item raporteurs

Brendan McWilliams, Vodafone

12 Work item leadership

RAN 3

13 Supporting Companies

Vodafone, Nokia, Ericsson, Nortel, Mannesmann

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: F1: Intra Domain Connection of RAN Nodes to Multiple CN Nodes: Overall
System Architecture

SA 2 is responsible for this.

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

(one Work Item identified as a building block)

41. RAB Quality of Service Negotiation over Iu during relocation

Last distributed as: RP-010168

Work Item Description

Title

RAB Quality of Service Negotiation over Iu during relocation

1 3GPP Work Area

X	Radio Access
X	Core Network
	Services

2 Linked work items

None

3 Justification

In release 99, for services that could accept looser QoS requirements than those requested by the CN in the relocation request, there exist no means for UTRAN to propose alternative (looser) QoS. For such services the relocation will fail.

4 Objective

This work item should enhance the relocation so that QoS parameters can be negotiated by the UTRAN during relocation. However, it should be as simple as possible.

5 Service Aspects

The intention of the work item is to allow continuation of service during relocation

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
25.413			RAN #11	
23.060				
24.008				

11 Work item raporteurs

Chenghock Ng, NEC

12 Work item leadership

TSG-RAN WG3

13 Supporting Companies

NEC, Siemens, Motorola, Telecom Italia, Alcatel

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

42. Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning

Last distributed as: RP-010270

Work Item Description

Title: Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None identified.

3 Justification

At the 3GPP LCS Work Shop held in London on 1/11/01and 1/12/01 it was agreed that for A-GPS positioning, sufficient functional separation existed with RNC functions to justify the opening the interface towards a standalone SMLC.

4 Objective

The objective of this work item is to provide for support of an open interface between the SMLC and the SRNC within the UTRAN for the support of A-GPS positioning. This new interface would be analogous to the Lb interface defined in the GSM LCS specifications with the exceptions that the positioning messages are terminated at the SRNC and mapped to release 99 RRC messages and that the positioning messages also support broadcast of LCS assistance data in support of the RRC broadcast messages.

The addition of the interface should be compatible the release 99 Iu, Iur and Iub and radio interfaces. The addition of this interface does not preclude the A-GPS to be supported in the SRNC.

5 Service Aspects

None identified.

6 MMI-Aspects

None identified.

7 Charging Aspects

None identified.

8 Security Aspects

None identified.

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			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
3GPP TS 25.4XY	Positioning Calculation Application Part (PCAP)	RAN 2	RAN 3	RAN #12	RAN #12	
3GPP TS 25.4XX	UTRAN I_{upc} Interface: Signalling Transport	RAN 2	RAN 3	RAN #12	RAN #12	
3GPP TS 25.4XW	UTRAN I_{upc} Interface: Layer 1	RAN 2	RAN 3	RAN #12	RAN #12	
3GPP TS 25.4XV	UTRAN I_{upc} Interface: General Aspects and Principles	RAN 2	RAN 3	RAN #12	RAN #12	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.401		UTRAN architecture description; Stage 2	RAN #12	Add new Iupc interface and new stand alone A-GPS SMLC network entity.
25.305		UTRAN Stage 2	RAN #11	Modify Network Reference Model to show stand alone A-GPS SMLC and add stage 2 call flows for A-GPS positioning.

11 Work item raporteurs

Kirk Burroughs, Qualcomm, San Jose, California, USA

12 Work item leadership

RAN 2

13 Supporting Companies

Qualcomm, SBC, Cingular Wireless, Samsung Electronics Research Institute, Hutchison 3G, NEC, Orange PCS, and Vodafone Group

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 UE positioning

xxx1 Provision of SRNC - SMLC Open Interface

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 #14

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)

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#11with 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					

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
25.201		Physical layer – General description			RAN#14	
25.211		Physical channels and mapping of transport channels onto physical channels (FDD)			RAN#14	
25.212		Multiplexing and channel coding (FDD)			RAN#14	
25.213		Spreading and modulation (FDD)			RAN#14	
25.214		Physical layer procedures(FDD)			RAN#14	
25.221		Physical channels and mapping of transport channels onto physical channels (TDD)			RAN#14	
25.222		Multiplexing and channel coding (TDD)			RAN#14	
25.223		Spreading and modulation (TDD)			RAN#14	
25.224		Physical layer procedures(TDD)			RAN#14	

The expected finalisation date is TSG-RAN #14

11 Work item raporteurs

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#11with 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#14	
25.302		Service provided by the physical Layer	RAN#14	
25.303		UE functions and Inter-layer procedures in connected mode	RAN#14	
25.306		UE Radio Access Capabilites	RAN#14	
25.321		Medium access control (MAC) protocol specification	RAN#14	
25.331		Radio resource control (RRC) protocol specification	RAN#14	

The expected finalisation date is TSG-RAN #14

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#11with 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 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
TS 25.401		UTRAN Overall Description		RAN #14		
TS 25.420		UTRAN Iur Interface: General Aspects and Principles		RAN #14		
TS 25.422		UTRAN Iur interface signalling transport		RAN #14		
TS 25.423		UTRAN Iur Interface RNSAP Signalling		RAN #14		
TS 25.424		UTRAN Iur interface data transport & transport signalling for CCH data streams		RAN #14		
TS 25.425		UTRAN Iur interface user plane protocols for CCH data streams		RAN #14		
TS 25.426		UTRAN I_{ur} and I_{ub} Interface Data Transport & Transport Signalling for DCH Data Streams		RAN #14		
TS 25.430		UTRAN I_{ub} Interface General Aspects and Principles		RAN #14		
TS 25.432		UTRAN Iub interface signalling transport		RAN #14		
TS 25.433		UTRAN Iub Interface NBAP Signalling		RAN #14		
TS 25.434		UTRAN Iub interface data transport & transport signalling for CCH data streams		RAN #14		
TS 25.435		UTRAN Iub interface user plane protocols for CCH data streams		RAN #14		
TS 25.442		UTRAN Implementation Specific O&M Transport		RAN #14		

The expected finalisation date is TSG-RAN #14

11 Work item raporteurs

Mike Diesen, Motorola

12 Work item leadership

TSG-RAN WG3

13 Supporting Companies

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: 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#11with 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#14	
25.102		UE Radio Transmission and Reception (TDD)	RAN#14	
25.104		UTRA (BS) FDD; Radio transmission and Reception	RAN#14	
25.105		UTRA (BS) TDD; Radio transmission and Reception	RAN#14	
25.123		Requirements for support of Radio Resource Management (TDD)	RAN#14	
25.133		Requirements for support of Radio Resource Management (FDD)	RAN#14	
25.141		Base station conformance testing(FDD)	RAN#14	
25.142		Base station conformance testing(TDD)	RAN#14	

The expected finalisation date is TSG-RAN #14

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 rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
		WG1			RAN#15	

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 #15	
25.212		Multiplexing and channel coding (FDD)	RAN #15	
25.213		Spreading and modulation (FDD)	RAN #15	
25.214		FDD : Physical layer procedures	RAN #15	
25.215		Physical layer measurements (FDD)	RAN #15	
25.331		Radio Resource Control (RRC) Protocol Specification	RAN #15	

11 Work item raporteurs

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.

49. Gated DPCCH Transmission

Last distributed as: RP-010266

Work Item Description

Title

The Gated DPCCH Transmission

2 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

The UE battery saving, UL/DL interference reduction, and capacity increase are important for deploying the UMTS services. The gated DPCCH transmission can be the solutions for the above objective. This WI is a continuation of the WI "Terminal Power Saving Features".

4 Objective

For improving the terminal power saving, UL/DL interference reduction, capacity increase and minimizing signalling impacts, the transmission of DPCCH associated with DSCH can be gated.

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		×	×		
No	×			×	×
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
25.840		WG1		RAN #12	RAN #13	
25.938		WG3		RAN #12	RAN #13	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.214			RAN #13	
25.301			RAN #13	
25.302			RAN #13	
25.331			RAN #13	
25.101			RAN #13	
25.133			RAN #13	
25.423			RAN #13	
25.433			RAN #13	

11 Work item raporteurs

Ju Ho Lee, Samsung (juholee@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)

14b The WI is a Building Block: parent Feature is "Radio Interface improvement"

50. UMTS 1900

Last distributed as: RP-010234

Work Item Description

Title:

UMTS 1900

For consideration under agenda item 6.11.

1 3GPP Work Area

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 bands currently occupied by PCS-1900. It is noted that Release 99 does not provide complete support for these bands. In addition, coexistence with other technologies has not been evaluated.

4 Objective

The purpose of this work item is to generate a report summarizing a study of co-existence of UTRA FDD and PCS1900, TIA/EIA-136, TIA/EIA/IS-95 in the following bands:

1850 – 1910 MHz: Up-link (UE transmit, Node B receive)
1930 – 1990 MHz: Down-link (Node B transmit, UE receive)

Based on the report the RF characteristics for both UE and BTS supporting this band will need to be added/corrected compared to Release 99.

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

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					

16 Expected Output and Time scale

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#13	
25.104		UTRA (BS) FDD; Radio transmission and reception	RAN#13	
25.113		Requirements for Support of Radio Resource Management (FDD)	RAN#13	
25.133		Base Station Electromagnetic compatibility (EMC)	RAN#13	
25.141		Base station conformance testing (FDD)	RAN#13	
25.331		RRC Protocol	RAN#13	
25.942		RF System Scenarios	RAN#13	
25.306		Radio UE capability	RAN#13	
34.121		Terminal Conformance Specification, Radio Transmission and Reception	T#13	

17 Work item raporteurs

Howard Benn

12 Work item leadership

RAN WG 4

13 Supporting Companies

Cingular, AWS, Motorola, Nortel Networks, Nokia, Ericsson, VoiceStream Wireless

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

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

51. Enhancement on the DSCH hard split mode

Last distributed as: RP-010205

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 identifed 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

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.212		Multiplexing and channel coding (FDD)	RAN #14	
25.214		Physical Layer Procedure (FDD)	RAN #14	
25.331		RRC Protocol Specification	RAN #14	
25.423		UTRAN Iur Interface RNSAP Signalling	RAN #14	
25.433		UTRAN Iub Interface NBAP Signalling	RAN #14	

11 Work item raporteurs

Jaeyoel KIM, SAMSUNG Electronics. jykim@samsung.com

12 Work item leadership

TSG-RAN WG1

13 Supporting Companies

Samsung, LG, Siemens, Qualcomm Europe, CATT, ETRI, SK Telecom, Hyundai

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

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: 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 rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
25.xxx	NodeB synchronisation for 1.28 Mcps TDD	WG1		RAN # 13	RAN # 14	TR to be created

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.123		Requirements for Support of Radio Resource Management (TDD)	RAN # 14	
25.221		Physical channels and mapping of transport channels onto physical channels (TDD)	RAN # 14	
25.223		Spreading and modulation (TDD)	RAN # 14	
25.224		Physical Layer Procedures (TDD)	RAN # 14	
25.225		Physical layer – Measurements (TDD)	RAN # 14	
25.302		Services provided by the physical layer	RAN # 14	
25.331		RRC Protocol Specification	RAN # 14	
25.402		Synchronisation in UTRAN Stage 2	RAN # 14	
25.433		UTRAN Iub Interface NBAP Signalling	RAN # 14	
25.423		UTRAN Iur Interface RNSAP Signalling	RAN # 14	

11 Work item raporteurs

Ms. Jinling HU (CWTS/CATT)

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

53. RL Timing Adjustment

Last distributed as: RP-010261

Work Item Description

Title

RL Timing Adjustment

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

Optimising the existing procedures will increase the efficiency of UTRAN and the quality of service to the end user.

4 Objective

WG1 has already expressed (outgoing liaison R1-010135) that in the event of RL adjustment being required, the Rel99/Rel4 process of deleting and re-establishing a RL temporarily causes additional DL interference in one or more cells due to loss of macro-diversity gain. In addition it slightly increases the risk of dropped calls. Therefore RAN WG1 asked RAN WG3 to consider implementing a RL adjustment procedure for a future release.

This work task aims at introducing this possibility to execute a timing adjustment of one individual RL, typically one of several RLs in the active set.

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					

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

New specifications						
Spec No.	Title	Prime rsp. WG	2nd ary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
25.xxx		WG3	WG2	RAN #14	RAN #14	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.423		RNSAP	RAN #14	
25.433		NBAP	RAN #14	
25.331		RRC	RAN #14	

11 Work item raporteurs

Elena Voltolina (Ericsson)

12 Work item leadership

TSG-RAN WG3

13 Supporting Companies

Ericsson, Nokia, Philips, 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

RRM optimizations for Iur and Iub

54. Separation of resource reservation and radio link activation

Last distributed as: RP-010271

Work Item Description

Title

Separation of resource reservation and radio link activation

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

Optimising the existing procedures will increase the efficiency of UTRAN and the quality of service to the end user.

4 Objective

This work task aims at introducing the possibility to have dedicated resources reserved in UTRAN without transmitting energy on the corresponding radio link(s). Furthermore, a separate mecha-nism for activating and deactivating radio transmission related to the reserved resources shall be introduced.

The separation will enable the following optimisations in UTRAN:

- delayed activation of a radio link at soft handover for high bit rate users, thus avoiding a potential handover problem;
- quicker channel type switching back to Cell_DCH;
- quicker radio link additions of radio links that recently were part of the active set;

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		
No	X	X		X	X
Don't know					

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

New specifications						
Spec No.	Title	Prime rsp. WG	2nd ary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
25.xxx		WG3		RAN #14	RAN #14	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.420		Iur general aspects and principles	RAN #14	
25.423		RNSAP	RAN #14	
25.430		Iub general aspects and principles	RAN #14	
25.433		NBAP	RAN #14	

11 Work item raporteurs

Gert-Jan van Lieshout (Ericsson)

12 Work item leadership

TSG-RAN WG3

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

14b The WI is a Building Block: parent Feature

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

RRM optimizations for Iur and Iub

55. Traffic Termination Point Swapping

Last distributed as: RP-010209

Work Item Description

Title:

Traffic Termination Point Swapping

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None identified.

3 Justification

The concept of traffic termination point is defined in TS 25.430(UTRAN Iub Interface:General Aspects and Principles). Because traffic termination point is a logical model, this shouldn't restrict the utilization of concept in real implementation. i.e. one Node B can have many traffic termination points and these can be mapped on physically separated units, respectively.

Currently once the traffic termination point was decided during the RL setup, this cannot be changed during its lifetime. However, if radio link parameters are modified dramatically, it is beneficial for Node B to change allocated traffic termination point and associated signaling link. This procedure can be used for efficient Node B resource management or O&M purpose.

4 Objective

The objective of this work item is to introduce new function in NBAP for Node B to be able to initiate traffic termination point swapping without RL releasing.

5 Service Aspects

None identified.

6 MMI-Aspects

None identified.

7 Charging Aspects

None identified.

8 Security Aspects

None identified.

9 Impacts

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

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

This is a Release 5 Work Item

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
25.433		UTRAN Iub Interface NBAP Signalling	RAN #14	

11 Work item raporteurs

Antti Toskala, Nokia, Helsinki, Finland

12 Work item leadership

RAN 3

13 Supporting Companies

Nokia, Nortel Networks, InterDigital, Siemens

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:

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

56. Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods

Last distributed as: RP-010210

Work Item Description

Title: **Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods**

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None identified.

3 Justification

At the 3GPP LCS Work Shop held in London on 1/11/01and 1/12/01 it was agreed standalone SMLC could be specified for A-GPS method and other positioning methods should be also considered for standalone SMLC.

4 Objective

The objective of this work item is to provide for support of an open interface between the SMLC and the SRNC within the UTRAN for the support of Rel'4 positioning methods positioning, i.e. Cell ID based, OTDOA based and A-GPS

Whether standalone SMLC is used or not needs to be transparent for the UE and will only impact the SRNC which supports standalone SMLC.

In UTRAN is shall be also transparent to other network elements besides SRNC, whether standalone SMLC or integrated SMLC is supported.

5 Service Aspects

None identified.

6 MMI-Aspects

None identified.

7 Charging Aspects

None identified.

8 Security Aspects

None identified.

9 Impacts

Affects :	USIM	ME	AN	CN	Others

Yes			X		
No	X	X		X	
Don't know					

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

This is a Release 5 Work Item

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
New TR	SRNC – SMLC Location Protocol	RAN 2	RAN 3	RAN #12	RAN #13	See Note 1.

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.401		UTRAN architecture description; Stage 2	RAN #14	Add new Iux interface and new SMLC network entity.
25.305		UTRAN Stage 2	RAN #14	Modify Network Reference Model add stage 2 call flows for Cell ID based, OTDOA and A-GPS positioning methods.

Note 1 : There exists (not yet RAN appoved) a WI for A-GPS only, and in this case intention is to use the defined A-GPS call flows/messages/protocols when applicaple assuming the interface is done with consideration for extending to other methods. Whether the same specification can be extended or whether a new one needs to be created is to be evaluated once the needed signalling elements are concluded.

To allow for a stand alone SMLC, a new interface is required between the SMLC and the SRNC. The SMLC principle will be such that the SRNC without intergrated SMLC can query the standalone SMLC for the position of the UE.

The measurement in support for LCS defined in Rel'99/Rel'4 for UE/LMU are usable for the SMLC and can be relayed by the SRNC to the standalone SMLC for UE location calculation purposes.

11 Work item raporteurs

Antti Toskala, Nokia, Finland

12 Work item leadership

RAN 2

13 Supporting Companies

Hutchison3g, Nokia, Siemens, Vodafone Group

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

57. UE positioning enhancements for 1.28 Mcps TDD

Last distributed as: RP-010215

Work Item Description

Title

UE positioning enhancements for 1.28 Mcps TDD

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 are refinement and adoption of methods that are defined for release 5.

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
25.xxx	UE positioning enhancements for 1.28 Mcps TDD	WG2		**RAN # 13**	**RAN # 14**	**TR to be created**

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
25.305		Stage 2 Functional Specification of Location Services in UTRAN	RAN # 14	
25.123		Requirements for Support of Radio Resource Management (TDD)	RAN # 14	
25.224		Physical Layer Procedures (TDD)	RAN # 14	
25.225		Physical layer – Measurements (TDD)	RAN # 14	
25.302		Services provided by the physical layer	RAN # 14	
25.303		Interlayer procedures in connected mode	RAN # 14	
25.304		UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode	RAN # 14	
25.331		RRC Protocol Specification	RAN # 14	
25.420		UTRAN Iur Interface: General Aspects and Principles	RAN # 14	
25.423		UTRAN Iur Interface RNSAP Signalling	RAN # 14	
25.430		UTRAN Iub Interface: General Aspects and Principles	RAN # 14	
25.433		UTRAN Iub Interface NBAP Signalling	RAN # 14	

11 Work item rapporteur

Ms. Xiaohua MEI (CWTS/CATT)

12 Work item leadership

TSG-RAN WG2

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)

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