

3GPP PCG15(05)06

Valbone, France, 6th October 2005



TSG-RAN #28 & #29 meeting Report

Source: TSG-RAN Chairman



TM

A GLOBAL INITIATIVE

TSG RAN WG Elections results

- **Election for NEW RAN WG Leaders took place:**
- **TSG RAN WG1**
 - Chairman: Dirk Gerstenberger (Ericsson)
 - Vice Chairs: Sadayuki Abeta (NTT DoCoMo), Juho Lee (Samsung)
- **TSG RAN WG2**
 - Chairman: Denis Fauconnier (Nortel)
 - Vice Chairs: Richard Burbidge (Motorola), Michael Roberts (NEC)
- **TSG RAN WG3**
 - Chairman: Alexander Vesely (Siemens)
 - Vice chairs: James Miller (Interdigital), Cheng Hock Ng (NEC)

TSG RAN WG Elections results



- **TSG RAN WG4**

- Chairman: Howard Benn (Motorola)
- Vice chairs Takaharu Nakamura (Fujitsu), Man Ng (Lucent)

- **TSG RAN WG5**

- Chairman: Phil Brown (NTT DoCoMo)
- Vice Chair and RF area chairperson: Carolyn Taylor (Motorola)
- Vice Chair and SIG area chairman: Bosco Choi (Anritsu)

A G L O B A L I N I T I A T I V E

Change Request Overview

- Number of CRs on Release '99 :
 - 7 CRs approved. (TSG-RAN #27: 2)
- Number of CRs on Release 4 only (non Cat A):
 - 5 CRs approved (TSG-RAN #27: 2).
- Number of CRs on Release 5 only (non Cat A):
 - 693 CRs approved (TSG-RAN #27: 44).
- Number of CRs on Release 6 only (non Cat A):
 - 537CRs approved (TSG-RAN #27:128).
- Total number of CRs in RAN including Category A:
 - 1325 CRs approved (TSG-RAN #27: 211)

ITU-R matters: Update 6 of Recommendation M.1457

- A new request from ITU-R 8/F was fulfilled and answered together with the M.1457 proposed update and handled by correspondence.
- It is proposed to take the December version of our specification for the referencing tables to be provided in May 2006.
- All the material was sent for the 3rd of October.

Liaisons

- LS on considerations to avoid interference for terrestrial networks for onboard GSM networks (from ETSI MSG)
 - A joint meeting between all parties involved was held in September and decided that CEPT ECC SE7 shall be in charge of all coexistence studies..
- LS on **Formal request by ECC PT1 to 3GPP to develop specifications for FDD uplink use in the bands 2010 – 2025 MHz and/or 1900 – 1920 MHz paired with a potential downlink in the band 2570 – 2620 MHz (CEPT ECC PT1)** was handled (see new work item).

Old Releases

- **Load due to CRs on Release 99 remains extremely low, only a few CRs were approved.**
 - **Release 99 is basically subject to modifications due to tests and also introduction of new frequencies that are still subject to be possibly deployable with an infrastructure based on Release 99.**
- **Release 4 is similar to Release 99**
- **Release 5 there are still corrections coming for HSDPA and MBMS plus introduction of tests**
- **Release 6 is now completed from a RAN perspective apart from tests aspects and Correction phase has already started.**

Completed WI/SI Item

- **SI UTRA FDD TMA**
- **SI Continuous connectivity for packet data users**
- **UMTS 2600 MHz FDD**
- **LCR TDD, Testing Layer 2 and layer 3 protocol aspects (SIG)**
- **Difference and Corresponding Effect Analysis between FDD and 1.28Mcps TDD in Radio Access Stratum Protocol Aspects**

Release 6: WIs/SIs completed at RAN#27

Work Item	Expected completion
Rel-7 Improvements of the Radio Interface	
UMTS 2.6 GHz TDD	December 2005
UMTS 900 MHz	December 2005
UMTS 1700 MHz	December 2005
UE Antenna Performance Evaluation Method and Requirements	March 2006
Improved Performance Requirements for HSDPA UE based on Rx Diversity (type 1) & LMMSE equalizer (type 2)	March 2005
UE Performance Requirements for MBMS (TDD)	March 2006
Rel-7 RAN improvements	
Optimisation of channelisation code utilisation for 1.28 Mcps TDD	December 2005
Improved support of IMS Realtime Services using HSDPA/HSUPA	December 2005
Delay optimisation for procedures applicable to CS and PS Connections	March 2006

Project management

- It is foreseen that collocation of all WG will apply from November onwards as a principle
- Several Working groups are experiencing the need for continuous support from the current experts. Companies are requested to ensure that this will be the case.
- Joint meeting with CT met on IOT and try to provide inputs for the SA plenary meeting. The meeting failed to come to an agreement on the need to perform IOT. The location of the test team was also discussed and once again no result could be achieved.
- For 2006 it is foreseen that 2 additional meeting for TSG RAN WG1 and TSG RAN WG2 will be held

Release 7

Work Item	Expected completion
UE positioning Rel-7	
Inclusion of Uplink TDOA UE positioning method in the UTRAN specifications	June 2006
LCS Enhancements Related to Location-Based Services	June 2006
Multiple Input Multiple Output antennas (MIMO)	Decision on the way forward to be taken in December 2005
7.68Mcps TDD option	June 2006
3.84 Mcps TDD Enhanced Uplink	June 2006

New Work items approved

- Testing of ROHC performance
- Testing of Domain Specific Access Control
- Testing of Performance of Receiver diversity for HSDPA
- Testing of Improved Minimum Performance for HSDPA
- Testing of VGCS, VBS ciphering
 - completed at the last meeting
- Continuous connectivity for packet data users **LCS Enhancements Related to Location-Based Services** agreed at this meeting following approval at the previous TSG SA of a corresponding WI
- **1700 MHz band in Japan**
- Improved Performance Requirements for non-HSDPA channels based on Enhanced Receiver, Type 1 (Rx Diversity)
- **UTRA FDD TMA**

- UMTS 2.6 GHz DL External was subject to many arguments.
 - As it is a request from CEPT, the chairman proposed the work item approval after presentation of the different documents without discussion following guidance provided by PCG#7
 - “After a short discussion it was confirmed by the PCG that where a non-regulatory option is proposed within a specification, it was for the TSG to decide whether the option should be included or not. However, where the proposed option concerns a regulatory requirement particular to one or more regions, then the option shall be included, and the TSG should not debate the inclusion issue further.
 - **Decision PCG7/8:** Options in the form of a regulatory requirement particular to one or more regions, shall be included in 3GPP specifications. TSGs should not debate the inclusion or rejection of such options. [3GPP/PCG#7(01)20].”
 - And ask the PCG to review the arguments and decide on a GO/NO GO option for TSG RAN (See annex A).

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TSG RAN Report



Budget for TTCN development in 2006 for TSG RAN WG5

2006 Tasks	Workload (mm)	%	RAN work items	Industry references
FDD R99, Rel-5 maintenance & deliveries HSDPA testing enhancement, A-GPS testing	18	20	TEI, WT_54 WT_T1-06_36	GCF WI-010, 012, -013, -014, -015
LCR TDD Rel-5 upgrading & HSDPA	24	27	WT_T1-06_13 WT_T1-06_36	TDIA WG terminal conformance test
FDD Rel-5 RoHC performance / PDCP	5	6	RANimp-RABSE5_Test	*
FDD Enhanced UL test & Rel-6 upgrading	19	21	EDCH_Test	*
FDD Rel-6 network sharing testing	4	4	NTShar-UTRANEnh_Test	*
IMS conformance testing	11	12	IMS-CCR_Test	*
Release Control Management	9	10		Shared use by 3GPP industry
Total	90	100		TM

- 7 subtasks and 90 mm of workloads identified for 2006
- TDIA intends to provide 12 mm (experts free of charge) for LCR TDD
- R&S allows to carry-over 2.5 mm (expert free-of charge) for enhanced UL

* Note: a GCF WI is intended.

Budget for TTCN development in 2006 for TSG RAN WG5

- TSG RAN would like TSG SA to note the following TSG RAN request to PCG
 - the 3GPP funding request **58 mm**
 - RAN-approved ToR of MCC task 160 (SP-050619/RP-050263) to PCG/OP#15 for approval
- TSG RAN would like also to inform TSG SA that it is currently seeking for further voluntary funding for the shortfall (**17.5 mm**)
 - within 3GPP member companies
 - from 3GPP MRPs at PCG/OP#15

TSG RAN Meeting Calendar

Meeting #	Date	Host	Location
30	30 Nov. - 2 Dec. 2005	European Friends of 3GPP	Malta
31	08 – 10 March 2006	CCSA	China
32	31 May - 2 Jun 2006	European Friends of 3GPP	Varsaw
33	20 - 22 Sep 2006	US Friends of 3GPP/TTC/ARIB	Hawai
34	29 Nov - 1 Dec 2006	European Friends of 3GPP	Budapest

Depending on the progress in SA2 it might necessary to scheduled half a day in Malta to complete work on the CN/RAN split before the Regular meeting, hosted by EF3.

TSG RAN WGs Meeting Calendar

Meeting	Date	Host	Location
WG1#43, WG2#49, WG3#49, WG4#37, WG5#29	07-11 November 2005	Samsung	Seoul, Korea
WG1#44, WG2#50, WG3#50, WG4#38, WG5#30	13 - 17 Feb 2006	North American Friends of 3GPP	US
WG1#45, WG2#51, WG3#51, WG4#39, WG5#31	8 - 12 May 2006	Datang	China
WG1#46, WG2#52, WG3#52, WG4#40, WG5#32	28 Aug - 1 Sept 2006	European Friends of 3GPP	Europe
WG1#47, WG2#53, WG3#53, WG4#41, WG5#33	6 - 10 Nov 2006	European Friends of 3GPP	Europe

- RAN WG1 #42bis: 10 – 14 October 2005, San Diego, US
- RAN WG2 #48bis: 10 – 14 October 2005, Cannes, France, hosted by EF3.
- RAN WG3 #48bis: 11 – 14 October 2005, Cannes, France, hosted by EF3.

ANNEX A



- **Attached to this report you will find**
 - **Tdoc RP-050646 WI description for UMTS 2.6 GHz DL External, (Annex B)**
 - **Tdoc RP-050454 from CCSA Way to solve the dispute on bands of 1900-1920MHz and 2010-2025MHz (Annex C), and**
 - **Tdoc RP-050594 from IP Wireless, China Mobile, TD Tech, UTStarcom, CATT and Huawei FDD uplink use in 1900 – 1920 MHz and 2010 – 2025 MHz? Also supported by Samsung (Annex D)**

A G L O B A L I N I T I A T I V E

Agenda Item: 8.16
Source: O2, Qualcomm, Telecom Italia, Telefonica, TeliaSonera, T-Mobile
Title: New Work Item Description: UMTS 2.6 GHz FDD DL External
Document for: Approval

Introduction:

This draft work item has been presented to RAN#28. RAN#28 decided to postpone a decision on this new Work Item, as no formal request from the regional regulator was available. This request is now available and can be found in RP-050566. This work is intended for ITU region 1.

Work Item Description

UMTS 2.6 GHz FDD DL External

1 3GPP Work Area

X	Radio Access
	Core Network
	Services

2 Linked work items

None

3 Justification

European regulatory committee ECC PT1 formally requests 3GPP:

- to develop, as soon as possible, specifications for FDD uplink use in the bands 2010 – 2025 MHz and/or 1900 – 1920 MHz paired with a potential downlink in the band 2570 – 2620 MHz.
- to give feedback on the feasibility of the current ECC PT1 working assumption to pair 1900 – 1920 MHz with 2600 – 2620 MHz, and to pair 2010 – 2025 MHz with 2585 – 2600 MHz.

- to provide regular feedback on the progress of this work item, in order to assist ECC PT1's band designation work.

ECC PT1 asks 3GPP to note that FDD use in the bands 2010 - 2025 MHz and 1900 - 1920 MHz is intended as an alternative to TDD use. ECC PT1 intends that the option for TDD use in these bands should remain. However, mixed TDD/FDD use in a band in one country is not anticipated.

4 Objective

The purpose of this work item, which is for ITU Region 1, is to generate necessary information of 2.6 GHz FDD system detailed below:

- **Generate a report summarizing a study of radio requirements UTRA FDD in the 2.6 GHz Band**
 - 2010 – 2025 MHz and 1900 – 1920 MHz: Up-link options (UE transmit, Node B receive)
 - 2570 – 2620 MHz: Down-link (Node B transmit, UE receive)
- The co-existence with IMT2000 technology within 2500 – 2690 MHz and with other IMT2000 bands shall be considered.
- Generate CR's to update the appropriate documents.
- TSG RAN WG2 - study any issues related to UMTS at 2.6 GHz FDD DL external band-signalling aspects.
- TSG RAN WG3 - study any possible interface impacts to UMTS networks.
- TSG RAN WG5 – generate CRs for conformance test specification
- Any additional related issues.

5 Service Aspects

None

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

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

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

New specifications						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#	Comments	
25.101		UE Radio transmission and reception (FDD)		RAN#32 (June 2006)		
25.104		UTRA (BS) FDD; Radio transmission and reception		RAN#32 (June 2006)		
25.113		Base Station Electromagnetic compatibility		RAN#32 (June 2006)		
25.133		Requirements for Support of Radio Resource Management (FDD)		RAN#32 (June 2006)		
25.141		Base station conformance testing (FDD)		RAN#32 (June 2006)		
25.331		RRC Protocol		RAN#32 (June 2006)		
25.942		RF System Scenarios		RAN#32 (June 2006)		
25.306		Radio UE capability		RAN#32 (June 2006)		
25.307		Requirements on UEs supporting a Release Independent Frequency Band		RAN#32 (June 2006)		
34.121		Terminal Conformance Specification, Radio Transmission and Reception		RAN#32 (June 2006)		

11 Work item rapporteur(s)

Han van Bussel, T-Mobile Intl.

12 Work item leadership

RAN WG 4

13 Supporting Companies

O2, Qualcomm, Telecom Italia, Telefonica, TeliaSonera, T-Mobile

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

Title: Way to solve the dispute on bands of 1900-1920MHz and 2010-2025MHz

Source: CCSA

Agenda Item: 6.1

Document for: Discussion

Introduction

The discussion on the bands use for 1900-1920MHz, and 2010-2025MHz was raised at last RAN plenary (RAN#28, Quebec, Canada, 01-03 June 2005) meeting. There existed severe dispute between regions on this issue. Considering the cooperation in 3GPP, this issue should be treated carefully.

Discussion

1. From the point of the global harmonization of frequency

Based on the requirement of global roaming and lower cost of R&D, the global harmonization of frequency band for cellular mobile communications is not only a basic principle of ITU, but also a basic principle of 3GPP.

In the related contribution, it was mentioned that the band of 1900-1920MHz, and 2010-2025MHz may be Up-link options whereas 2500-2690MHz to be the down link option. However, the arrangement of band 2500-2690MHz is up to now not approved in ITU-R for M.1036, and there is no any discussion on the core bands (1900-1920, 1920-1980MHz, 2010-2025, 2110-2170MHz etc.) of IMT-2000,. The core bands of IMT-2000 had been allocated to operators in many countries.

If 3GPP study the issue too early, for example before WRC-07, there exist the dangers that the output specifications may not harmonize with the recommendations of ITU.

2. From the point of the 3G developing in globe

The core band for IMT-2000 system FDD and TDD mode had been identified by ITU for a long time. More than 130 operators have got licenses in these bands. 3GPP had determined the related RF requirements in its TS25.1xx serial specs according to these ITU recommendations. 3GPP has taken great efforts to FDD and TDD relevant technical specifications. The manufacturers have developed the products complying these specifications, and these products have been tested and just begin to be deployed. Under this background, FDD and TDD frequency band and TS are the basis for 3G industry and global deployments. If changing the specifications for some region at present, the global 3G industry will be damaged.

UTRA FDD and UTRA TDD are the 3G specifications results from the cooperation between 3GPP OPs, such as ETSI, CCSA, etc. They are just at the beginning of commercial deployment. To ensure the global success of 3GPP and its specifications, it is not wise to discuss changing the use of the core frequency bands.

3. From the cooperation in 3GPP

There existed severe dispute between regions on the use of band 1900-1920MHz, and 2010-2025MHz just because some region try to change the global harmonization of this frequency band. The further discussion on this issue will damage the cooperation between regions.

Conclusion and proposal

Based on the discussion above, the following conclusions can be drawn,

- 1) At present, the further discussion in 3GPP on this issue may damage the developing of 3G systems.

- 2) At present, the further discussion in 3GPP on this issue may damage the cooperation between partners in 3GPP
- 3) The arrangement of 2500-2690MHz is still under discussion in ITU. The best action is waiting the decision from ITU

So, it proposed that no further discussion and no action in 3GPP on changing the use of band 1900-1920MHz and 2010-2025MHz before ITU WRC-07.

Reference

RP-050298, Comments on RP-050289, RITT, CMCC, CATT, TD-TECH, ZTE, Huawei, IPwireless and UTStarcom

Agenda Item: 8.16
Source: IPWireless, China Mobile, TD-Tech, UTStarcom, CATT, Huawei, ZTE, RITT
Title: FDD uplink use in 1900 – 1920 MHz and 2010 – 2025 MHz?
Document for: Decision/Approval

A request from CEPT PT1 has been made [1] to 3GPP to develop specifications for the use of FDD uplink in the bands 1900 – 1920 MHz and 2010 – 2025 MHz with the intention that the use of TDD in these bands would be withdrawn in some countries. Designation of these bands for the original TDD usage or the proposed new FDD usage would be made on a national basis. A WI has been proposed [2] in relation to this request from CEPT PT1.

However, 3GPP is requested to consider the following

1. A decision was taken in 1998 to have 2 fundamental (W)CDMA modes, FDD and TDD, in ETSI and in ITU.
2. Spectrum, has been designated by ITU on a worldwide basis for TDD
3. Manufacturers have invested money and developed products based on these worldwide and regional TDD designations.
4. Operators have invested money and have bought TDD designated spectrum and equipment based on the understanding that worldwide/regional TDD designations exist and based upon the status of 3GPP TDD as an international standard.
5. Co-ordination of regional and worldwide TDD designations naturally enables world wide and intra-regional roaming. Single HCR/LCR TDD terminals are relatively straightforward, sharing a common RF structure and this further facilitates international roaming and provides a high degree of assurance for the TDD market; hence fair and reasonable protection of the investments made by 3GPP companies in this technology is provided.
6. An attempt to re-designate bands 1900 – 1920 and 2010 – 2025 on a country-by-country (national) basis as FDD or TDD undermines the fundamental principle of a worldwide/international standard and is thus in contradiction with the decisions made by ITU in 1998. This makes any market for TDD less certain and hinders the ability of a TDD terminal to roam internationally or within a designated region, when the availability of TDD spectrum is removed in some areas. This has the potential to devalue existing spectrum currently designated, sold or being used for TDD and the legitimate commercial interests of those involved in 3GPP TDD technologies are compromised.
7. TDD is a maturing and continually evolving technology which has demonstrated high levels of performance and flexibility, particularly for asymmetric packet-based data services. In light of the above-mentioned detrimental aspects of the proposed removal of a ubiquitous designation of TDD spectrum, companies involved in this technology within 3GPP do not consider this proposal to be sufficiently bilateral to warrant acceptance.

Recommendations

- No Work Item should be approved in response to the liaison from CEPT
- 3GPP should instead remind CEPT PT1 of points 1 through 7 and point out that such a proposed fundamental change in principle needs to be raised in ITU.

References

- [1] RP-050566 Formal request by ECC PT1 to 3GPP to develop specifications for FDD uplink use in the bands 2010 – 2025 MHz and/or 1900 – 1920 MHz paired with a potential downlink in the band 2570 – 2620 MHz, RAN#29
- [2] RP-0505430 New Work Item Description: UMTS 2.6 GHz FDD DL External, RAN#29