

**Work Item Description**

Title: **UMTS 850**

**1 3GPP Work Area**

X	Radio Access
	Core Network
	Services

**2 Linked work items**

*None*

**3 Justification**

WRC 2000 extended the current IMT 2000 frequency allocation to include bands currently occupied with-in the 850 MHz. band. In particular, ITU-R Working Party 8F has recently forwarded into the ITU approval process a revision to ITU-R Recommendation M.[1036-1]. This revision includes recognition of the WRC 2000 bands identified for IMT-2000, in particular the band range 806-960 MHz.

The supporters of this WI proposal believe that GPRS/EDGE at 850 will eventually begin evolving into UMTS at 850 in the 2007 – 2008 time frame with-in ITU Region 2. This band is currently occupied by a variety of technologies so studies of migration paths of the likely combinations of technologies should be considered (both internal and external to 3GPP). While progressing the specification work for UMTS 850 3GPP TSG RAN WG4 should consider studies performed by and recommendations given by Committee T1 (T1P1) concerning band plans, interference, and ITU Region 2 implementation issues.

It is suggested that the changes to incorporate UMTS in the 1900 MHz band could be used as the basis for this work which would reduce the effort required within 3GPP.

**4 Objective**

~~The purpose of this work item is to:~~ [The purpose of this work item is to generate necessary information of the 850 MHz FDD system for potential deployment only in ITU Region 2 detailed below:](#)

- 4.1 Generate a report summarizing a study of UTRA FDD in the 850 band (as described below) which includes, or will include the migration (including co-existing studies) of the following technologies: GPRS/EDGE, TIA/EIA-136, TIA/EIA/IS-95, and Analog AMPS into UMTS 850.

The specific bands to be studied are<sup>1</sup>:

- 824 – 849 MHz: Up-link (UE transmit, Node B receive)  
869 – 894 MHz: Down-link (Node B transmit, UE receive)

- 4.2 Generate CR's to update the appropriate documents  
4.3 TSG RAN WG2 - study any issues related to UMTS at 850 MHz.  
4.4 TSG RAN WG3 - study any possible interface impacts to UMTS networks.  
4.5 Any additional related issues.

---

<sup>1</sup> These uplink/downlink pairings are consistent with the revision of ITU-R M.[1036-1].

**5 Service Aspects**

*None*

**6 MMI-Aspects**

*None*

**7 Charging Aspects**

*None*

**8 Security Aspects**

*None*

**9 Impacts**

<b>Affects :</b>	<b>USI M</b>	<b>ME</b>	<b>AN</b>	<b>CN</b>	<b>Others</b>
<b>Yes</b>		X	X		
<b>No</b>	X			X	X
<b>Don't know</b>					

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#23 (March 2004)		
25.104		UTRA (BS) FDD; Radio transmission and reception		RAN#23 (March 2004)		
25.113		Base Station Electromagnetic compatibility		RAN#23 (March 2004)		
25.133		Requirements for Support of Radio Resource Management (FDD)		RAN#23 (March 2004)		
25.141		Base station conformance testing (FDD)		RAN#23 (March 2004)		
25.331		RRC Protocol		RAN#23 (March 2004)		
25.942		RF System Scenarios		RAN#23 (March 2004)		
25.306		Radio UE capability		RAN#23 (March 2004)		
25.307		Requirements on UEs supporting a Release Independent Frequency Band		RAN#23 (March 2004)		
34.121		Terminal Conformance Specification, Radio Transmission and Reception		T#23 (March 2004)		

**11 Work item rapporteurs**

Don Zelmer Cingular Wireless LLC

**12 Work item leadership**

RAN WG 4

**13 Supporting Companies**

Cingular Wireless LLC, AT&T Wireless Services, Rogers Wireless, Nortel Networks, Motorola, Siemens, Nokia, Ericsson

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

**14b The WI is a Building Block:**

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

**14c Proposed Work Plan:**

The following Table contains a break down of items needed to complete the WI and assigns the responsibility to various parties. The items in this Table are not necessarily in proper chronological order.

<u>Item#</u>	<u>Effort Required</u>	<u>Responsibility</u>
<u>1</u>	<u>Provide description of existing band plan</u>	<u>T1P1.2</u>
<u>2</u>	<u>Define overall deployment scenarios for UMTS850</u>	<u>T1P1.2</u>
<u>3</u>	<u>Provide requirements for co-existence with other technologies</u>	<u>T1P1.2</u>
<u>3.5</u>	<u>Provide guidance on simulation assumptions</u>	<u>T1P1.2</u>
<u>4</u>	<u>Define detailed simulation assumptions to cater for items # 3 and 3.5 and collect them into a TR</u>	<u>RAN4</u>
<u>5</u>	<u>Perform simulations based on agreed upon simulation assumptions and collect results into a TR</u>	<u>RAN4</u>
<u>6</u>	<u>Give guidance on simulation results. Recommend more simulation as needed to complete task</u>	<u>T1P1.2</u>
<u>7</u>	<u>Generate CRs to update the appropriate specifications and other documents.</u>	<u>RAN4</u>
<u>8</u>	<u>Study any signaling issues related to UMTS at 850 MHz</u>	<u>RAN2</u>
<u>9</u>	<u>Study any possible interface (Iu, Iub, Iur) impacts to UMTS network</u>	<u>RAN3</u>
<u>10</u>	<u>Any additional related issues</u>	<u>ALL</u>

14d Item 14c was accepted by T1P1.2 in the 6 March 2003 conference call. It has been updated and is proposed to be approved by RAN 19.

14e Item 4, the Objective, has been updated. It is proposed that the changes to item 4 be approved by RAN 19.