

CETECOM ICT Services GmbH

Untertürkheimer Str. 6-10, 66117 Saarbruecken
RSC-Laboratory

Phone: +49 (0) 681 598-0
Phone: +49 (0) 681 598-0

Fax: -9075
Fax: -9075

Test report no.: 2-4506-01-01/06

Date: 2007-02-20

Page 1 of 12

Recognized by the
Federal Communications Commission
Anechoic chamber registration no.: 90462 (FCC)
Anechoic chamber registration no.: IC 3463A-1
TCB ID: DE 0001



Accredited by the
German Accreditation Council
DAR-Registration Number

DAT-P-176/94-D1



Independent ETSI
compliance test house



Accredited Bluetooth® Test Facility (BQTF)

Test report no.	:	2-4506-01-01/06
Applicant	:	Pirelli Broadband Solutions
Type	:	DISCUS Dual Phone
Test Standard	:	FCC TCB Exclusions List, July 2002, Transmitter Category II e
FCC ID	:	
Certification No. IC	:	

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Page 2 of 12

Table of contents

1	GENERAL INFORMATION	3
1.1.	ADMINISTRATIVE DATA OF THE TEST FACILITY	3
1.1.1	<i>Identification of the testing laboratory</i>	3
1.2.	NOTES	3
1.3	DETAILS OF APPLICANT.....	4
1.4	APPLICATION DETAILS	4
1.5	TEST ITEM	5
1.5.1	<i>Test conditions testing</i>	5
1.6	TEST SPECIFICATIONS.....	5
2	STATEMENT OF COMPLIANCE	6
2.1	SUMMARY OF MEASUREMENT RESULTS.....	6
3	TRANSMITTER CO-TRANSMISSIONS	7

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Page 3 of 12

1 General information

1.1. Administrative data of the test facility

1.1.1 Identification of the testing laboratory

Company name:	Cetecom ICT Services GmbH
Address:	Untertürkheimerstr. 6-10 D-66117 Saarbruecken Germany
Laboratory accreditation:	DAR-Registration No. DAT-P-176/94-D1 Bluetooth Qualification Test Facility (BQTF) Federal Communications Commission (FCC)
Responsible for testing laboratory:	Identification/Registration No : 90462 Harro Ames Phone: +49 681 598 0 Fax: +49 681 598 9075 email: info@ict.cetecom.de

1.2. Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.



.....
Responsible for testing laboratory
(Harro Ames)



.....
Responsible for test report
(Michael Berg)

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Page 4 of 12

1.3 Details of Applicant

Name : Pirelli Broadband Solutions
Address : Viale Sarca 222
City : 20216 Milan
Country : Italy
Phone :
Fax :
Contact : Mr. Massimo Lo Iacono
Phone : +39 02 6442 9378
Fax : +39 02 6442 3455
e-mail : massimo.loiacono@pirelli.com

1.4 Application Details

Date of receipt of application : 2006-12-27
Date of receipt of test item : 2006-12-27
Date(s) of test : 2006-12-27 to 2007-02-14
Date of report : 2007-02-20

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Page 5 of 12

1.5 Test Item

Type of equipment : GSM/PCS Mobile Phone with VoIP over WLAN
Model name : DISCUS Dual Phone

Details of Manufacturer

Company : same as applicant
Address :
City :
Country :

Frequency Range (or fixed frequency) : 2412 to 2462 MHz, 5 MHz Channel spacing, and 1850 to 1910 MHz

1.5.1 Test conditions testing

Description	Shortcut	Unit	Value
Nominal Temperature / humidity	T_{nom}	°C / %	+23 / 38%
Low Temperature	T_{low}	°C	
High Temperature	T_{high}	°C	
Nominal Power Source	V_{nom}	V	3.7
Low Power Source	V_{low}	V	
High Power Source	V_{high}	V	

Type of powersource: V DC

1.6 Test Specifications

FCC TCB Exclusions List, July 2002, Transmitter Category II e

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Date: 2007-02-20

Page 6 of 12

2 Statement of Compliance

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

2.1 Summary of Measurement Results

FCC TCB Exclusions List, July 2002, Transmitter Category II e

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Date: 2007-02-20

Page 7 of 12

3 Transmitter Co-transmissions

Limits :

Co-Transmission has relatively short duration (<< 30 seconds), serving as handover (handoff) between two networks.

Filing must include details about maximum handover time, and how handover co-transmission time is restricted.

In this report we test the timing behavior of the Phone during changing the network platform from PCS to WLAN and WLAN to PCS.

There was no parallel transmission longer than 30 seconds.

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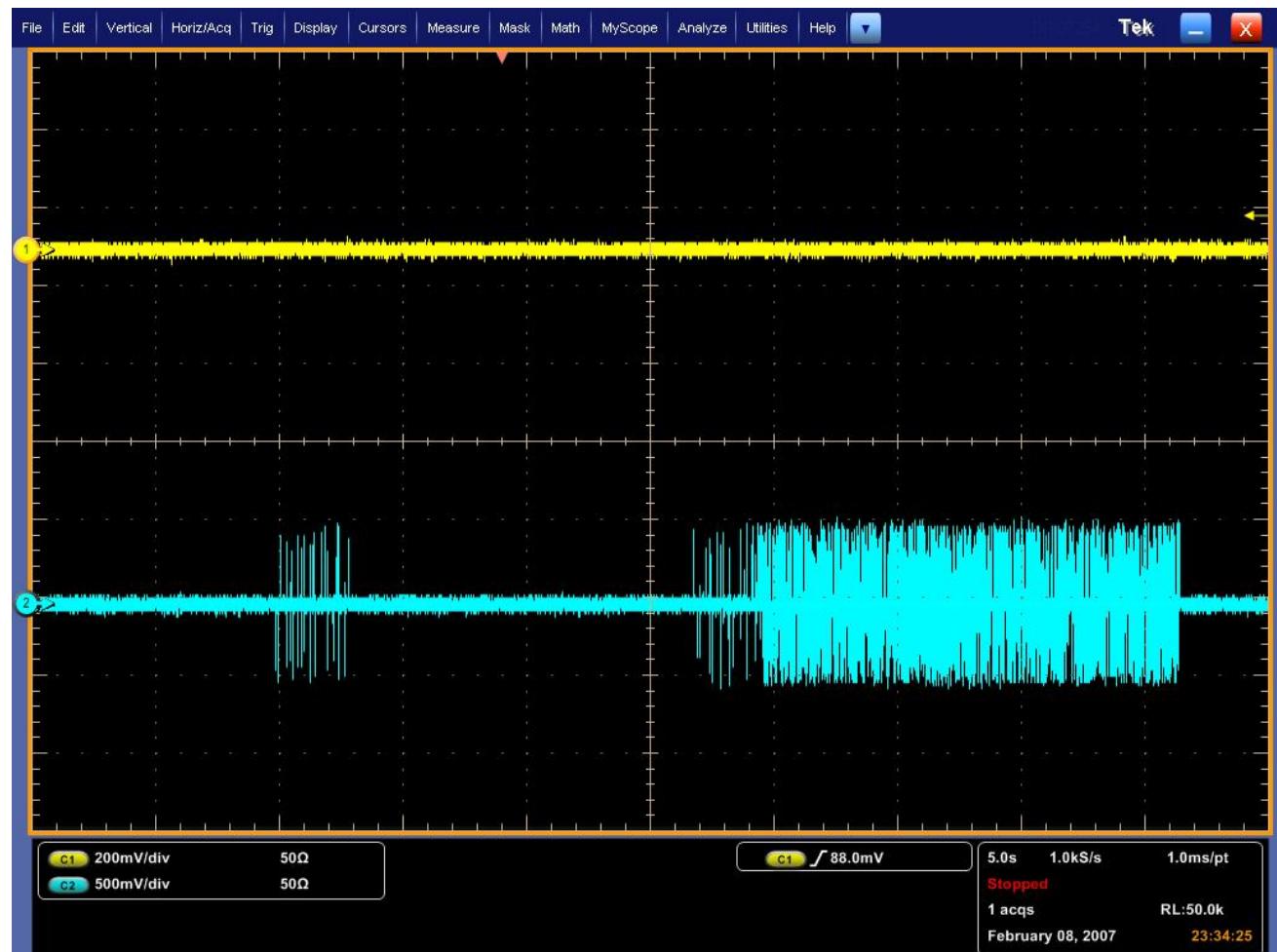
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Test report no.: 2-4506-01-01/06

Date: 2007-02-20

Page 8 of 12

Plot 1: Transmission in PCS only.



The light blue plot shows the output of the mobile phone PCS part in real time. We used a Tektronix Phosphor Scope.

The first packet shows the connection to the network platform (here a CMU200A), the second (longer) packet shows a connection and the closing of this connection.

The yellow plot shows the output of the WLAN part of this mobile phone (no reaction)

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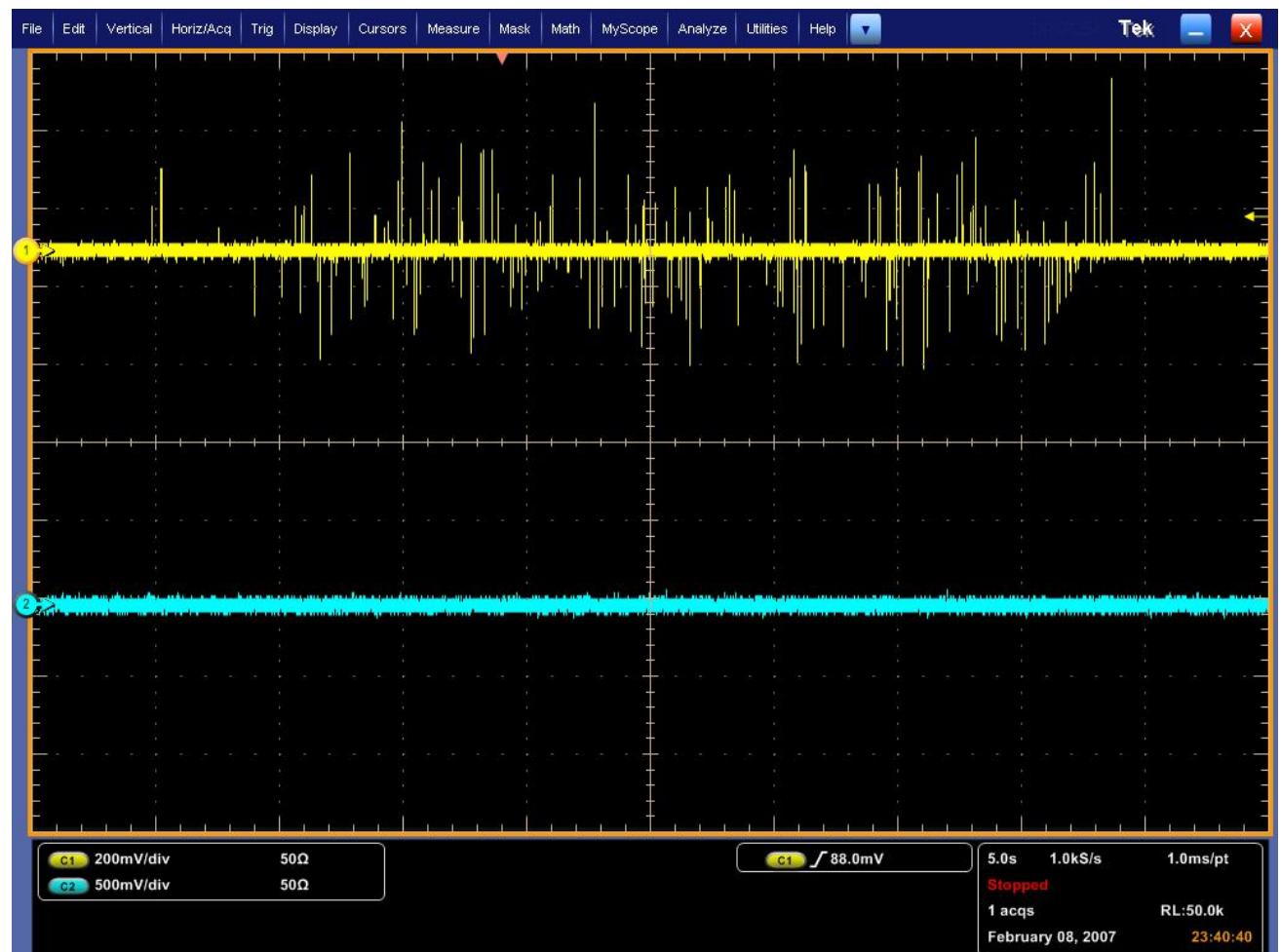
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Test report no.: 2-4506-01-01/06

Date: 2007-02-20

Page 9 of 12

Plot 2: Transmission in VoIP over WLAN only.



The yellow plot shows the output of the WLAN part in real time. We used a Tektronix Phosphor Scope.

The first packet shows the connection to the network platform (connection to a test sip-server in our house), the second (longer) packet shows a connection and the closing of this connection.

This yellow plot is not as dense as the PCS transmission, as there is a very low duty cycle for VoIP over WLAN transmission.

The light blue plot shows the output of the PCS part of this mobile phone (no reaction)

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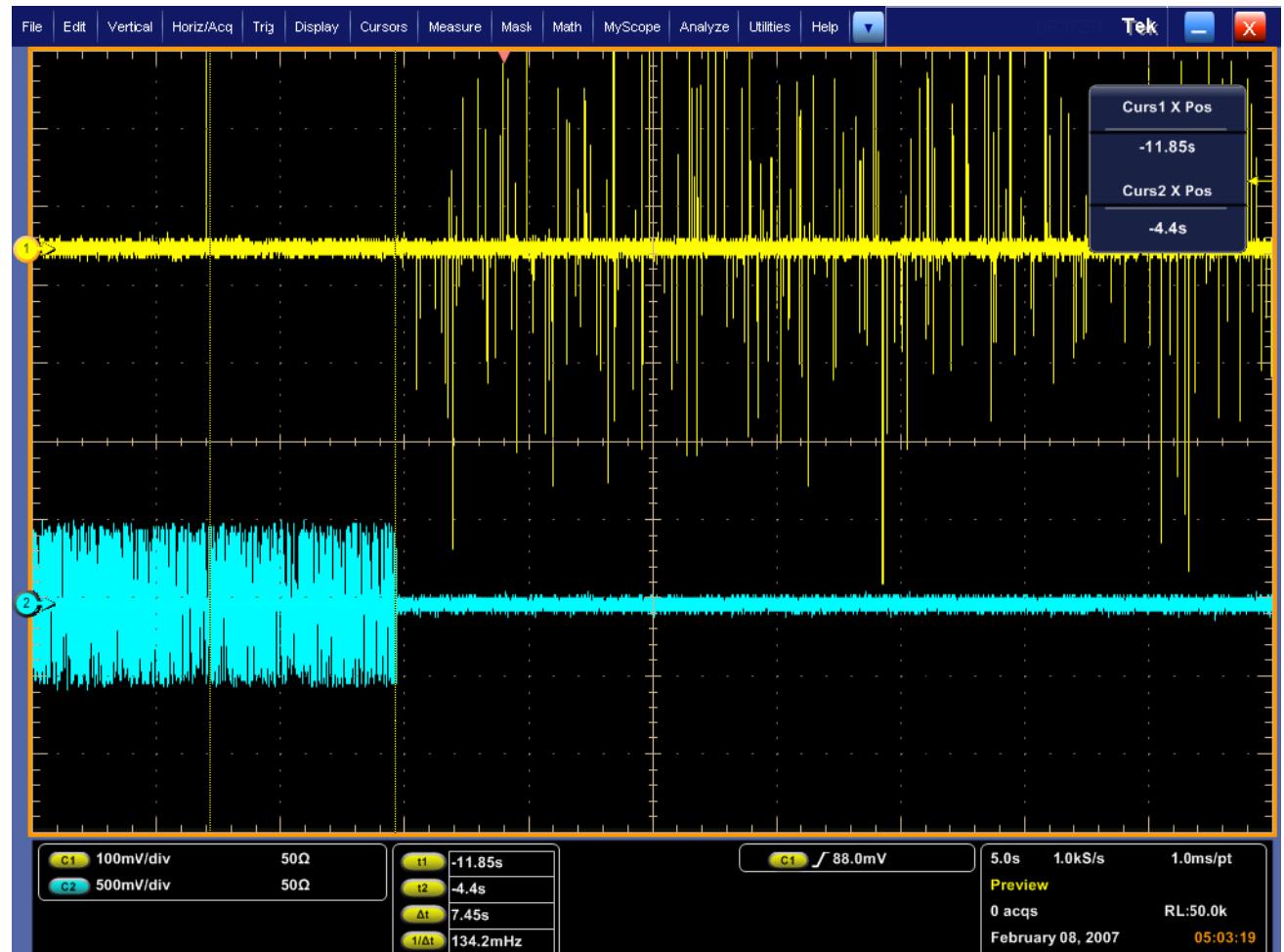
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Fax: -9075

Test report no.: 2-4506-01-01/06

Date: 2007-02-20

Page 10 of 12

Plot 3: Changing from PCS platform to VoIP over WLAN



The yellow plot shows the output of the WLAN part , the light blue the output of the PCS part.

The blue line shows the changing from PCS to VoIP. There is no parallel transmission .

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Test report no.: 2-4506-01-01/06

Date: 2007-02-20

Page 11 of 12

Plot 4: Changing from VoIP over WLAN to PCS.



The yellow plot shows the output of the WLAN part , the light blue the output of the PCS part.

The blue line shows the changing from VoIP to PCS. Ther is a parallel emission during about 10 seconds. According to the WLAN protocoll there are some other emissions parallel to the PCS connection, but only for very short time during about 20 seconds. After this time there were no additional parallel emessions.

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Page 12 of 12

Used Testequipment

Device	Manufacturer	Type	S/N Number	Inv. No. Cetecom
Real time oscilloscope	Tektronix	DPO 7254	B022702	
WLAN AP	Lancom	L-54 a/g	276653	