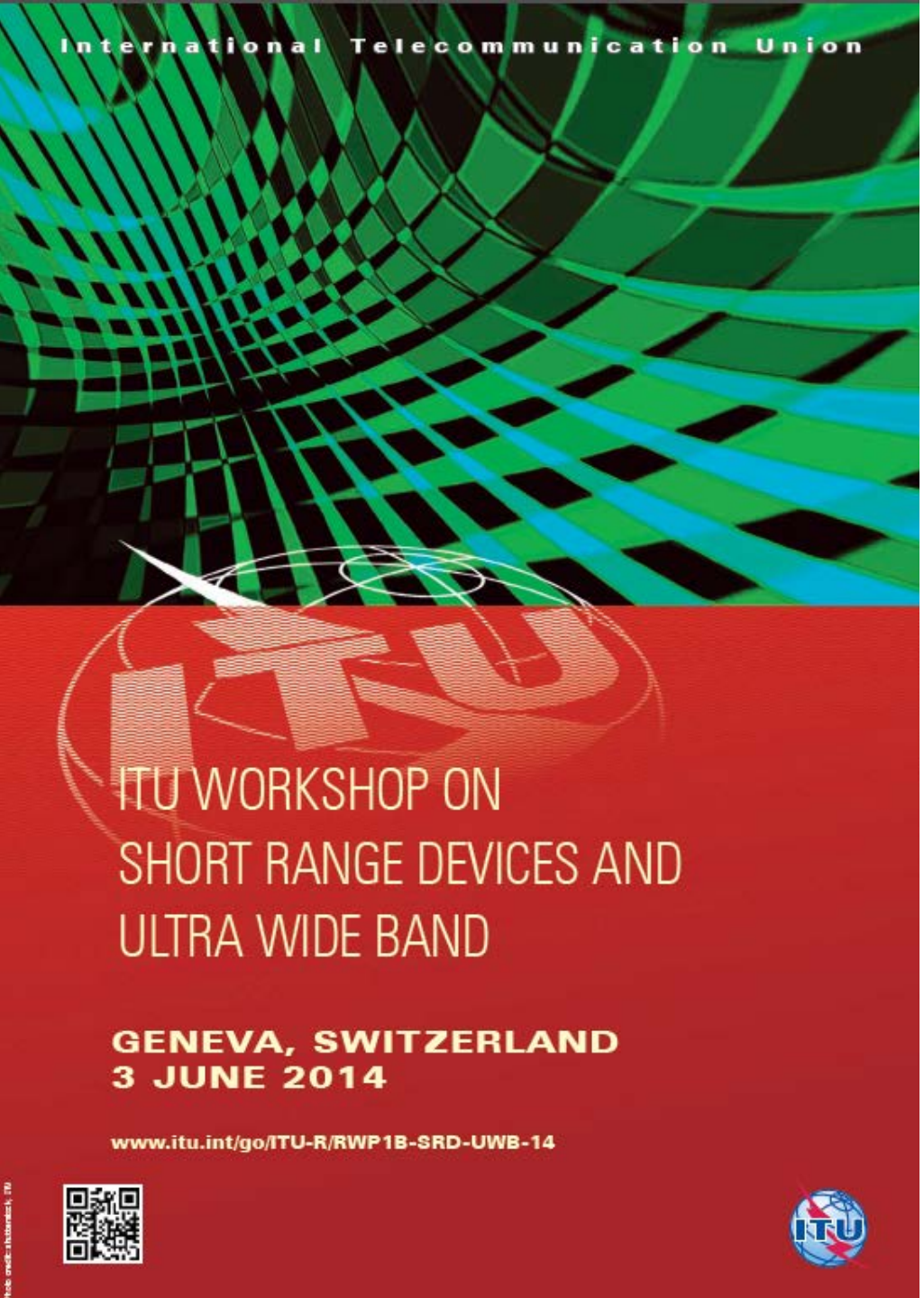

ITU WORKSHOP on
SHORT RANGE DEVICES (SRDs)
AND ULTRA WIDE BAND (UWB)
(Geneva, 3 June 2014*)

SRD spectrum utilization and harmonization in RCC

Aleksei Ivashkin

** in conjunction with the June 2014 block of meetings of ITU-R Study Group 1*

RCC activities on SRDs

This presentation is based on the work conducted by the Working group on radiofrequency spectrum management, under the RCC Commission on regulation of the use of radiofrequency spectrum and satellite orbits

Information taken from the latest approved version of the Working document on the use of short-range devices in RCC countries

SRDs frequency bands

NON-SPECIFIC SHORT RANGE DEVICES

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
6765-6795 kHz	42 dBµA/m at 10m
13.553-13.567 MHz	42 dBµA/m at 10m
26.957-27.283 MHz	42 dBµA/m at 10m; 10 mW e.r.p
40.660-40.700 MHz	10 mW e.r.p.
433.050-434.790 MHz	10 mW e.r.p.
863-870 MHz	≤ 25 mW e.r.p.
2400.0-2483.5 MHz	10 mW e.i.r.p.
5725-5875 MHz	25 mW e.i.r.p.
24.00-24.25 GHz	100 mW e.i.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
138.20-138.45 MHz	10 mW e.r.p.	BLR, MDA
61.0-61.5 GHz	100 mW e.i.r.p. N	BLR, MDA

SRDs frequency bands

TRACKING, TRACING AND DATA ACQUISITION

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
456.9-457.1 kHz	7 dBµA/m at 10 m

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
169.4-169.475 MHz	500 mW e.r.p.	MDA

SRDs frequency bands

WIDEBAND DATA TRANSMISSION SYSTEMS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
2400.0–2483.5 MHz	100 mW e.i.r.p.
5150-5350 MHz	100 mW e.i.r.p.
5470-5725 MHz	100 mW e.i.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
57–66 GHz	40 dBm mean e.i.r.p.	ARM (63-64 GHz only), BLR, MDA

SRDs frequency bands

RAILWAY APPLICATIONS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
2446-2454 MHz	500 mW e.i.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
27.090-27.100 MHz	42 dBµA/m at 10 m	BLR, MDA
984-7484 kHz	9 dBµA/m at 10m	BLR, MDA
7.3-23.0 MHz	-7 dBµA/m at 10m	BLR, MDA
76-77 GHz 5	55 dBm peak e.i.r.p	ARM, MDA
865-869 MHz	2 W e.i.r.p.	BLR, RUS

SRDs frequency bands

ROAD TRANSPORT AND TRAFFIC TELEMATICS (RTTT)

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
5795-5815 MHz	2 W e.i.r.p. ; 8 W e.i.r.p.
76-81 GHz	55 dBm peak e.i.r.p
21.65-26.65 GHz	

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
63-64 GHz	43 dBm peak e.i.r.p	BLR

SRDs frequency bands

RADIODETERMINATION APPLICATIONS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
2400.0-2483.5 MHz	25 mW e.i.r.p.
9200-9500 MHz	25 mW e.i.r.p.
9500-9975 MHz	25 mW e.i.r.p.
10.5-10.6 GHz	500 mW e.i.r.p.
13.4-14.0 GHz	25 mW e.i.r.p.
24.00-24.25 GHz	100 mW e.i.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
24.05-27.00 GHz	For Tank Level Probing Radar (TLPR) -41.3 dBm/MHz e.i.r.p.	BLR, MDA
57-64 GHz		BLR, MDA
75-85 GHz		BLR, MDA

SRDs frequency bands

ALARMS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
868.6-868.7 MHz	10 mW e.i.r.p.
869.250-869.300 MHz	25 mW e.i.r.p.
869.650-869.700 MHz	10 mW e.i.r.p.
869.200-869.250 MHz	10 mW e.i.r.p.
869.300-869.400 MHz	10 mW e.i.r.p.
26.939-26.951 MHz	2 W e.i.r.p.
26.954-26.966 MHz	2 W e.i.r.p.
433.05-434.79 MHz	10 mW e.i.r.p.
868.0-868.2 MHz	10 mW e.i.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
149.950–150.0625 MHz	25 mW e.i.r.p.	ARM, RUS, UZB

SRDs frequency bands

MODEL CONTROL

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
26.995, 27.045, 27.095, 27.145, 27.195 MHz	100 mW e.r.p
34.995-35.225 MHz	100 mW e.r.p
40.665, 40.675, 40.685, 40.695 MHz	100 mW e.r.p
28.0-28.2 MHz	1 W, max. antenna gain is 3 dB

SRDs frequency bands

INDUCTIVE APPLICATIONS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
9 - 90 kHz	72 dBµA/m at 10m
90-119 kHz	42 dBµA/m at 10m
119-135 kHz	66 dBµA/m at 10m
135-140 kHz	42 dBµA/m at 10m
140-148.5 kHz	37.7 dBµA/m at 10m
6765-6795 kHz	42 dBµA/m at 10m
7400-8800 kHz	9 dBµA/m at 10m
13.553-13.567 MHz	42 dBµA/m at 10m
26.957-27.283 MHz	42 dBµA/m at 10m
10.200-11.000 MHz	9 dBµA/m at 10m

RADIO MICROPHONE APPLICATIONS INCLUDING AIDS FOR THE HEARING IMPAIRED

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
33.175-40.0 MHz	10 mW e.i.r.p.
40.025-48.5 MHz	10 mW e.i.r.p.
57.000-57.575 MHz	10 mW e.i.r.p.
58.0 MHz	25 mW e.i.r.p.
66-74 MHz	20 mW e.i.r.p.
87.5-92 MHz	20 mW e.i.r.p.
100-108 MHz	20 mW e.i.r.p.
144-230 MHz	20 mW e.i.r.p.
470-638 MHz	depends on country
710-726 MHz	depends on country

RADIO MICROPHONE APPLICATIONS INCLUDING AIDS FOR THE HEARING IMPAIRED

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
3155- 3400 kHz		ARM
823-832 MHz	100 mW e.i.r.p.	BLR, MDA
863-865 MHz	20 mW e.i.r.p.	BLR, MDA
1795-1800 MHz	20 mW e.i.r.p.	ARM, MDA
774-782 MHz	50 mW e.i.r.p.	BLR, MDA
790-814 MHz	10 mW e.i.r.p.	UZB
852-876 MHz	10 mW e.i.r.p.	UZB

SRDs frequency bands

RADIO FREQUENCY IDENTIFICATION APPLICATIONS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
865-868 MHz	
13.553-13.567 MHz	60 dBµA/m at 10m

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
2446-2454 MHz	≤ 500 mW e.i.r.p.	BLR, MDA
315 MHz, 902 MHz	10 mW e.i.r.p.	UZB
916-921 MHz	0 dB	RUS

SRDs frequency bands

ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
30.0-37.5 MHz	1 mW e.r.p.
401-406 MHz	

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
9-315 kHz	30 dBµA/m at 10m	BLR, MDA
315-600 kHz	-5 dBµA/m at 10m	BLR, MDA

SRDs frequency bands

WIRELESS AUDIO APPLICATIONS

Harmonized in most RCC countries radio frequency bands for the utilization of various types of SRDs:

Frequency Band	Power / Magnetic Field
87.5-108.0 MHz	50 nW e.r.p.
863-865 MHz	10 mW e.r.p.

Radio frequency bands for the Short Range Devices used in some RCC countries:

Frequency Band	Power / Magnetic Field	Administrations
1795-1800 MHz	20 mW e.i.r.p.	ARM, MDA

Requirement for obtaining of permissions on import of SRDs

In most RCC countries to import Short Range Devices importers must obtain of permission documents.

In each RCC country approved List of radio electronic facilities, which don't require permitting documents for the importation.

For example, for the Customs Union (custom territory of the Russian Federation, Republic of Belarus, Republic of Kazakhstan), Short Range Devices working on the following bands can be imported without permitting documents:

13.553-13.567 MHz, 26.939-26.951 MHz, 26.954-26.966 MHz, 28.0-28.2 MHz 26.957-27.283 MHz, 40.660-40.700 MHz, 433.050-434.790 MHz, 868.0-868.2 MHz, 2400.0-2483.5 MHz

Requirement for obtaining of permissions for SRD operations

In most RCC countries Short Range Devices may be used without license, permission for use of radio or frequency assignment and registration in case when devices meet the requirements in the the national law

All SRD frequency bands are permitted on secondary basis.

For some Short Range Devices require individual license and registration (for example SRDs working in the frequency bands:
2446-2454 MHz with >500 mW-4 W e.i.r.p;
5795-5815 MHz with 2 W e.i.r.p., 8 W e.i.r.p.)

Certification of SRDs

Short Range Devices must conform with the technical regulations done by the Authority.

In the Customs Union importer must submit declaration of conformity to technical regulations of the Customs union or certificate of conformity to technical regulations of the Customs union.
These documents may be executed by uniform forms, that are valid for all countries of the Customs Union.

Thank you for your attention