# INTERNATIONAL ELECTROTECHNICAL COMMISSION

# INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE (CISPR)

# <u>SUBCOMMITTEE A:</u> <u>RADIO INTERFERENCE MEASUREMENTS</u> <u>AND STATISTICAL METHODS</u>

# WG1: EMC INSTRUMENTATION SPECIFICATIONS

Approved minutes of the meeting of Working Group 1 of CISPR/A, held in Stresa, Italy on September 24, 2015.

Present:				
Chairman	W. Schaefer (US)			
<u>Chairman</u>	J. Nyman (FI)			
<u>Secretary</u>	J. Nyman (Fi)			
COUNTRY	ATTENDEE	STATUS	ATTENDEE	STATUS
<u>occivitat</u>	ATTENDEL	OTATOO	ATTENDEL	OTATOO
AUSTRALIA	Y. Ji	Member		
AUSTRIA	A. Kriz	Member		
CANADA	J. Mowbray	Member		
	R. Khan	Member		
CHINA	D. Meng	Member	P. Qu	Observer
	C. Qiang	Observer	X. Cai	Observer
	M. Xie	Observer	Y. Liu	Observer
DENMARK	K.A. Baltsen	Observer		
FRANCE	F. Ziadé	Member		
GERMANY	M. Stecher	Member	F. Deter	Member
	J. Medler	Member	D. Schwarzbeck	Member
	A. Klink	Member	N. Kiwull	Member
	FW. Trautnitz	Member	K. Hemmerlein	Observer
ITALY	B. Gorini	Member	F. Milan	Member
JAPAN	A. Sugiura	Member	I. Hirose	Member
	F. Amemiya	Member	K. Daigo	Member
	T. Shinozuka	Member	I. Minematsu	Member
	M. Midori	Member	S. Ishigami	Member
	K. Fujii	Member	K. Osabe	Member
	K. Tajima	Member	T. Shimasaki	Member
KOREA (Republic of)	S. Lee	Member	H. Keum	Observer
,	HS Kim	Member	WH. Jeon	Observer
NETHERLANDS	P. Beeckman	Member	JP. van Assche	Observer
	J. Janssen (IARU)	Member		
UNITED KINGDOM	M. Wiles	Member	D. Knight	Member
UNITED STATES	D. Heirman	Member	T. Peterson	Member
	M. Terrien	Member		

### 1. Opening of the meeting

The chairman opened the meeting at 9:00 am and thanked the Italian national committee for organizing the meeting and the meeting venue.

#### 2. Approval of the agenda

The agenda was approved as circulated before the meeting after adding the item 11.3: Antenna positioning for NSA measurements. The approved agenda is attached to these minutes as Attachment A.

#### 3. Approval of the minutes

The minutes of the previous CISPR/A/WG1 meeting, held in Frankfurt, Germany on October 16, 2014, which were circulated as CISPR/A/WG1(Secretary)15-01rev, were approved with no comments received within the 60 day comment period.

#### 4. To confirm and update membership of CISPR/A/WG1

The secretary circulated an attendance list and asked the attendees to provide the requested information.

## 5. Central office updates - New common IEC, ISO, ITU Patent Rights Policy

The secretary noted that any work done by CISPR/A/WG1 needs to be reviewed in light of possible patents or pending patents. If any patents exist they have to be officially noted and reported to the Central Office. Further information about this process can be found in Administrative Circular AC/10/2007.

#### 6. Projects

The summary of the project discussions followed the approved agenda (see Attachment A). The references used below are those shown under the associated agenda item.

#### 6.1 CISPR 16-1-1 Amd.3 Ed. 3.0: Normative annex defining calibration of measuring equipment

The chairman informed the working group about the approval of CISPR/A/1118/FDIS despite the fact that seven negative votes were received. As stated by the WG1 chairman in the CISPR/A meeting there is no need to make any changes to the current text proposed in the FDIS since detailed information of sufficient detail is already provided.

#### 6.2 CISPR 16-1-3 Amd.1 Ed. 2.0: Improvement of absorbing clamp calibration methods

The CISPR/A/1111/CDV was in the voting period at the time of the meeting with the due date set for October 23, 2015. Hence no further discussion took place.

### 6.3 CISPR 16-1-4 Amd.2 Ed. 3.0: Sites and antennas > 1 GHz

The chairman informed the working group that this project addresses Rx antenna pattern requirements. The draft CDV is waiting translation and the CDV is expected to be circulated by the end of October 2015.

Mr. Kriz presented reference g). The document shows pattern measurement data of antennas used in the frequency range above 1 GHz. The conclusion based on the measured data is that the manufacturing spread causes variations in antenna pattern larger than the uncertainty of the antenna pattern measurement. Especially V-type LPDA antennas show a much larger variation. A question was raised if the individual antenna pattern calibration is required instead of the typical data submitted by the manufacturer. Mr. Medler proposed to investigate more V-type LPDA antennas which seem to have larger deviation. The project leader Mr. Wiles noted that this issue needs more time and cannot be taken into the coming CDV. Mr. Stecher supported this. The chairman replied that we have recognized the problem and have to investigate this further. Mr. Schwarzbeck said that the manufacturer data could be made available. The final decision for the project was to go forward with the current text.

#### 6.4 CISPR 16-1-5 Amd.1 Ed.2.0: Site validation > 1 GHz

The chairman informed the working group that this project defines requirements for antenna pattern measurement sites. The draft CDV is waiting translation and the CDV is expected to be circulated by the end of October 2015.

#### 6.5 CISPR 16-1-6 Amd.1 Ed.1.0: EMC antenna calibration > 1 GHz

The chairman informed the working group that this project addresses antenna pattern measurement methods. The draft CDV is waiting translation and the CDV is expected to be circulated by the end of October 2015.

6.6 CISPR/B/D/F/H/I: GCPCs - CISPR 16-1-2: Introduction of Δ-ANs for the measurement on DC port of GCPCs

The chairman informed the working group that the closing date for comments on CISPR/A/1129/CD is November 27, 2015. Hence no further discussion took place.

#### 7. Matters referred to WG1 by CISPR/A

7.1 <u>CISPR/A/1088/INF:</u> US NC paper for discussion in Frankfurt – Test pulse requirements for RMS-Average detection – CISPR 16-1-1

Mr. Medler presented reference c). The document provides a proposal for verifying the pulse amplitude relationship of the RMS-Average detector. Mr. Medler noted that the proposal is an addition to the current method and could be included in CISPR 16-1-1 as an interpretation sheet. Mr. Deter noted that no technical issues can be published as an interpretation sheet. A discussion was held on how to implement the addition into CISPR 16-1-1. The final decision was to prepare a PAS.

<u>Action Item 15-01</u>: Mr. Medler to prepare text on the validation of the RMS-Average Detector and send to secretary of CISPR/A for publication as a PAS by September 30, 2015.

The chairman informed the working group about the work of an ad-hoc group to prepare a general maintenance project related to CISPR 16-1-1. It was decided to prepare a draft proposal and circulate it to the working group for comments.

Action Item 15-02: Mr. Terrien to prepare a draft proposal for the maintenance of CISPR 16-1-1 and circulate it within WG1 by March 31, 2016.

- 7.2 <u>CISPR/A/1089/INF</u>: US NC paper for discussion in Frankfurt Additions to current revisions of standards related to measurement uncertainty calculations –16-1-2: LISN calibration Mr. Kriz presented reference c). The document describes the uncertainty calculation for the calibration of a LISN in accordance with CISPR 16-1-2. The document also introduces additional maintenance items. Mr. Kriz concluded that WG1 shall make a decision on AMN adaptor correction techniques before moving forward with the specific uncertainty calculation. Mr. Kriz proposed to prepare an informative annex to CISPR 16-1-2. Prof. Sugiura was in favor of preparing an annex; Mr. Medler supported this as well. The meeting concluded that the final decision will be made under agenda item 11.2 which addresses the same issue.
- 7.3 <u>CISPR/A/1089/INF</u>: US NC paper for discussion in Frankfurt Additions to current revisions of standards related to measurement uncertainty calculations –16-1-3: absorbing clamp calibration

The chairman presented reference c). The chairman proposed to include a reference to CISPR 16-4-1 clause 7.2 in CISPR 16-1-3 (Ed.2) clause B.2.4. In addition, the chairman proposed to amend CISPR 16-4-1 clause 7.2 with the uncertainty contributions described in the document "Uncertainty Contributions to the Clamp Factor CF of the Absorbing Clamp", prepared by Mr. Ryser. The next step will be to prepare a proposal for the uncertainty calculation table.

7.4 <u>CISPR/A/1089/INF:</u> US NC paper for discussion in Frankfurt – Additions to current revisions of standards related to measurement uncertainty calculations – 16-1-4: NSA, RSM, SVSWR

Dr. Meng presented reference c). The document contains measurement data on the uncertainty of the NSA measurements in accordance with CISPR 16-1-4. Mr. Schwarzbeck asked for a clarification how the measurements had been performed. It was decided to prepare a more condensed document by the next meeting which includes additional data and a detailed explanation of the measurement method.

<u>Action Item 15-03</u>: Dr. Meng to prepare a condensed document on the uncertainty contributions of NSA measurement and circulate it within WG1 by September 30, 2016.

7.5 CISPR/A agenda item 10.3.1, action item 14-05: conversion and validation factor for large loop antennas

Dr. Beeckman presented reference d). The reference introduces tabular values for conversion and validation factors of large loop antenna systems. In addition, the reference contains some proposed changes to Annex C of CISPR 16-1-4 and relevant background information for inclusion in CISPR TR 16-3.

Mr. Midori presented references c) and d). The conclusion was a proposal to change the tolerance of the validation factor from ±2 dB to ± 3 dB. Mr. Deter supported this proposal. Dr. Beeckman proposed to investigate the tolerance requirement further. Mr. Schwarzbeck proposed to revise the tabular values presented by Dr. Beeckman. The chairman asked for a volunteer to lead the project. Dr. Beeckman volunteered. A small group was formed to perform this work; the following experts will participate: Mssrs. Beeckman, Medler, Schwarzbeck, Kriz, Milan, Midori, Deter.

Action Item 15-04: Dr. Beeckman to revise the proposals on conversion and validation factors for large loop antenna and circulate to WG1 by February 28, 2016.

The reference e) was submitted just before the meeting. The reference can be found on the IEC collaboration tools system.

#### 7.6 Proposal for amendment of CISPR 16-1-6

The chairman presented reference a). The document proposed to add the time domain measurement method (including gating) to the antenna calibration standard CISPR 16-1-6 clause 9 as an antenna calibration method in the frequency range 1 GHz to 18 GHz. Prof. Sugiura supported the proposal. Mr. Schwarzbeck noted that the time domain method is very good method for investigational purposes, but it is not that good for regular calibrations, due to its complexity. Mr. Kriz replied that the specific parameters for the time domain method must be specified (e.g., windowing and gating functions); otherwise measurement results may be ambiguous.

<u>Action Item 15-05</u>: The chairman to prepare a draft proposal on antenna calibration using time domain for amendment of CISPR 16-1-6 and circulate it within WG1 by April 30, 2016.

<u>Action Item 15-06</u>: The chairman to circulate the proposed text on antenna calibration using time domain that is targeted for the next version of C63.5 within WG1 by November 30, 2015.

#### 8. Co-ordination with other CISPR subcommittees

8.1 JTF CISPR/A-D: JTF - Chamber validation methods for test methods defined in CISPR 25

The chairman informed the WG that this project is at CDV stage. The CDV was approved in CISPR/D and was approved for FDIS circulation in August 2015. No further discussion took place.

#### 8.2 CISPR/I: Alternative AAN (ISN)

Prof. Sugiura presented reference g). The document showed issues related to the use of a shunt-type AAN and proposed a revision of CISPR 16-1-2.

<u>Action Item 15-07</u>: Prof. Sugiura to prepare a draft proposal on the alternative AAN and circulate it within WG1 by September 30, 2016.

#### 8.3 CISPR/B/D/F/H/I: Site validation below 30 MHz

Mr. Kriz summarized the discussion held in the ad-hoc group meeting. A new draft DC on site validation below 30 MHz will be circulated to the members of ad-hoc group by December 31, 2015. Mr. Kriz informed the working group about the document "Use of test sites not meeting the site validation criteria" prepared by Mr. Deter. This document was presented in the ad-hoc meeting as well.

Mr. Kriz presented also references e) and f). The conclusion related to reference f) was the proposal to add informative text into CISPR 16-1-4 clause 4 on the possible overload of active loop antennas.

<u>Action Item 15-08</u>: Mr. Kriz to prepare cautionary text on possible overload of an active loop antenna for inclusion in CISPR 16-1-4 and circulate it within WG1 by December 31, 2015.

#### 9. To discuss any further work with IEC TC 77

The chairman noted that there was nothing to report on this agenda item.

# 10. Matters arising from the minutes not covered in the meeting agenda

It was decided to review the action items assigned during the meeting after the agenda item 11. All action items except one from the previous WG1 meeting in Frankfurt, Germany were closed. Action item 14-07 was open and a new deadline of February 28, 2016 was established for its resolution. The

summary of the action items decided on during this meeting is presented in Table 2, as Attachment B to these meeting minutes.

#### 11. Any other business

11.1 Improvements to CISPR 16-1-4

Mr.Stecher presented reference b). The document introduces several maintenance items for CISPR 16-1-4. Mr. Stecher noted that the antenna factors calibrated according to CISPR 16-1-6 (free space antenna factors) shall be used when performing the NSA measurements. Mr. Knight offered to provide text on the cross-polar measurement process and uncertainty. The next step will be the circulation of an RR for CISPR 16-1-4.

<u>Action Item 15-09</u>: Mr. Knight to prepare text on cross-polar measurement methods and uncertainty and submit it to CISPR/A chairman by October 31, 2015.

Action Item 15-10: Mr. Stecher to prepare an RR to CISPR 16-1-4 by December 31, 2015.

11.2 Calibration of Impedance for V-network

Mr. Ziadé presented reference b). The reference describes the impact of adaptors on LISN measurements (this matter was also discussed under agenda item 7.2). The document proposed an amendment to the CISPR 16-1-2 providing guidelines how to improve accuracy and reliability of LISN calibration.

Mr. Kriz presented reference c). The measurements performed showed that the influence of adaptors is important for all AMN impedance calibrations.

Mr. Shinozuka presented reference d). The main comment in the document is that the adaptor influence is to be considered as an uncertainty contribution to the LISN calibration.

The chairman asked for the opinion of the WG how to proceed with these contributions. After a discussion it was decided to form a group to draft a proposal for the amendment of CISPR 16-1-2. The drafting group has the following members: Mssrs. Kriz (leader), Shinozuka, Medler, Ziadé.

<u>Action Item 15-11</u>: Mr. Kriz to prepare a draft proposal on calibration of impedance of V-network to amend CISPR 16-1-2 by September 30, 2016.

11.3 Antenna positioning for NSA measurement

The chairman informed the working group on the decision made at the CISPR/A/WG1 meeting in 2012 in Bangkok, Thailand on the antenna positioning for NSA measurement for horizontal polarization in the left and right position. This decision is recorded in the meeting minutes of Bangkok meeting under item 11.3 and also in the action item of 12-05. The text was agreed in 2013-02 but the text was never published in CISPR 16-1-4. It was decided to retrieve the agreed text and include it in CISPR 16-1-4 as was originally planned.

Action Item 15-12: Chairman of WG1 to retrieve previously agreed text on the antenna positioning for NSA measurement and send it to CISPR/A chairman for inclusion in next revision of CISPR 16-1-4 by October 15, 2015.

# 12. <u>Date and Place of the next meeting</u>

The next annual CISPR/A/WG1 meeting will be held in Hangzhou, China, in the week of October 24, 2016.

# 13. Adjournment

The chairman thanked the attendees for their participation and presentations given at the meeting and closed the meeting.

# **Attachment A**

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CISPR/A/WG1(Secretary)15-02rev September 24, 2015

INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE (CISPR)

SUBCOMMITTEE A: RADIO INTERFERENCE MEASUREMENTS AND STATISTICAL METHODS

WG1: EMC INSTRUMENTATION SPECIFICATIONS

Preliminary agenda for the meeting of CISPR/A/WG1 to be held in Stresa, Italy on September 24, 2015.

- 1. Opening of the meeting
- 2. Approval of the agenda
- 3. Approval of minutes of the meeting of CISPR/A/WG1 held in Frankfurt, Germany on October 16, 2014. Ref: a) CISPR/A/WG1(Secretary)15-01rev
- 4. To confirm and update membership of CISPR/A/WG1
- Central office updates New common IEC, ISO, ITU Patent Rights Policy Ref: a) AC/10/2007
- 6. Projects
  - 6.1 CISPR 16-1-1 Amd.3 Ed. 3.0: Normative annex defining calibration of measuring equipment

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1073/CDV
- c) CISPR/A/1099/RVC
- d) CISPR/A/1118/FDIS
- e) CISPR/A/1135/RVD

Action: To report status of work.

6.2 <u>CISPR 16-1-3 Amd.1 Ed. 2.0:</u> Improvement of absorbing clamp calibration methods

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1067/RR
- c) CISPR/A/1074/CD
- d) CISPR/A/1093/CC
- e) CISPR/A/1111/CDV

Action: To report status of work.

#### 6.3 CISPR 16-1-4 Amd.2 Ed. 3.0: Sites and antennas > 1 GHz

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1065/RR
- c) CISPR/A/1079/CD
- d) CISPR/A/1094/CC
- e) CISPR/A/1105/CD
- f) CISPR/A/1115/CC
- g) CISPR/A/WG1 (Kriz) 15-02

Action: To report status of work.

#### 6.4 <u>CISPR 16-1-5 Amd.1 Ed. 2.0:</u> Site validation > 1 GHz

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1077/RR
- c) CISPR/A/1083/CD
- d) CISPR/A/1096/CC

Action: To report status of work.

#### 6.5 CISPR 16-1-6 Amd.1Ed.1.0: EMC antenna calibration > 1 GHz

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1066/RR
- c) CISPR/A/1080/CD
- d) CISPR/A/1095/CC
- e) CISPR/A/1104/CD
- f) CISPR/A/1114/CC

Action: To report status of work.

#### 6.6 CISPR/B/D/F/H/I: GCPCs

- CISPR 16-1-2: Introduction of Δ-ANs for the measurement on DC port of GCPCs

Ref: a) <u>CISPR/A/1120 /RR</u> b) <u>CISPR/A/1129/CD</u>

Action: To report status of work.

# 7. Matters referred to WG1 by CISPR/A

7.1 <u>CISPR/A/1088/INF:</u> US NC paper for discussion in Frankfurt – Test pulse requirements for RMS-Average detection – CISPR 16-1-1

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1088/INF
- c) CISPR/A/WG1(Medler)15-01

Action: To report status of work and review the action items 14-01 and 14-02.

# 7.2 <u>CISPR/A/1089/INF:</u> US NC paper for discussion in Frankfurt – Additions to current revisions of standards related to measurement uncertainty calculations –16-1-2: LISN calibration

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1089/INF
- c) CISPR/A/WG1 (Kriz) 15-04

Action: To report status of work and review the action item 14-03.

7.3 <u>CISPR/A/1089/INF:</u> US NC paper for discussion in Frankfurt – Additions to current revisions of standards related to measurement uncertainty calculations –16-1-3: absorbing clamp calibration

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1089/INF
- c) CISPR/A/WG1(Schaefer)15-02

Action: To report status of work and review the action item 14-04.

7.4 <u>CISPR/A/1089/INF:</u> US NC paper for discussion in Frankfurt – Additions to current revisions of standards related to measurement uncertainty calculations – 16-1-4: NSA, RSM, sVSWR

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/1089/INF
- c) CISPR/A/WG1(Donglin)15-09

Action: To report status of work and review the action item 14-05.

7.5 CISPR/A agenda item 10.3.1, action item 14-05: conversion and validation factor for large loop antenna

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/WG1 LAS tables (Beeckman)15-01
- c) CISPR/A/WG1 LAS Tables (Midori-Kurihara-Fujii-Shinozuka)15-01
- d) CISPR/A/WG1 LAS Tables (Midori-McLean-Kurihara-Fujii-Shinozuka)15-02
- e) Loop Antenna Sytem CISPR 16-1-4 Ed. 3 Schwarzbeck

Action: To report status of work and review the action item 14-06.

7.6 Proposal for amendment of CISPR 16-1-6

Ref: a) CISPR/A/WG1(Schaefer)15-01

- 8. Co-ordination with other CISPR subcommittees
  - 8.1 JTF CISPR/A-D: JTF Chamber validation methods for test methods defined in CISPR 25

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/993/INF
- c) CISPR/A/1015/INF
- d) CISPR/A/1022/INF
- e) CISPR/A/1078/INF
- f) CISPR/A/1110/INF

Action: To report status of work.

- 8.2 CISPR/I: Alternative AAN (ISN)
  - Ref: a) CISPR/A/WG1(Secretary)15-01rev
    - b) CISPR/A/791/DC
    - c) CISPR/A/812/INF
    - d) CISPR/I/385/DC
    - e) CISPR/A/1064/INF
    - f) CISPR/A/WG1(Frankfurt/Sugiura, Amemiya, Hirasawa, Akiyama)14-01

#### g) CISPR/A/WG1(Sugiura, Amemiya, Hirasawa, Akiyama)15-01

Action: To report status of work.

# 8.3 CISPR/B/D/F/H/I: Site validation below 30 MHz

- CISPR 16-1-4: Specification of test sites and antennas

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- b) CISPR/A/989A/INF
- c) CISPR/A/1101/DC
- d) CISPR/A/1107/INF
- e) CISPR/A/WG1 (Kriz) 15-01
- f) CISPR/A/WG1 (Kriz) 15-03
- g) CISPR/A/WG1(Fujii-Sugiura-Yu Ji) 15-01
- h) CISPR/A/WG1(Fujii-Sugiura-Yu Ji) 15-02

Action: To report status of work and review the action item 14-07.

- 9. To discuss any further work with IEC TC 77
- 10. Matters arising from the minutes not covered in meeting agenda

Ref: a) CISPR/A/WG1(Secretary)15-01rev

- 11. Any Other Business
  - 11.1 Improvements to CISPR 16-1-4

Ref: a) CISPR/A/WG1(Secretary)15-01rev, item 11.1

b) CISPR/A/WG1(Stecher)15-01rev

Action: To report status of work.

11.2 Calibration of Impedance for V-network

Ref: a) CISPR/A/WG1(Secretary)15-01rev, item 11.3

- b) CISPR/A/WG1 (Ziadé)
- c) CISPR/A/WG1 (Kriz) 15-05
- d) CISPR/A/WG1(Shinozuka, Fujii, Sugiura)15-01

Action: To report status of work.

11.3 Antenna positioning for NSA measurement

Ref: a) CISPR/A/WG1(Secretary)15-01rev, item 11.3

- 12. Date and Place of the next meeting
- 13. Adjournment

# Attachment B Tabel 1: Summary of the Action Points arising from the Frankfurt meeting September 16, 2014

<u>ID</u>	Agenda item	Action	Responsibility	<u>Deadline</u>
14-01	7.1	To write a proposal for the interpretation sheet on the specification of the impulse generator	J.Medler	CLOSED
14-02	7.1	To make a work plan on the maintenance of CISPR 16-1-1	Chairman of WG1	CLOSED
14-03	7.2	To make a proposal for the uncertainty calculation for the calibration of a LISN to CISPR 16-1-2	A. Kriz	CLOSED
14-04	7.3	To make a proposal for the uncertainty calculation for the calibration of an absorbing clamp to CISPR 16-1-3	Chairman of WG1	CLOSED
<mark>14-05</mark>	7.4	To make a proposal for the uncertainty calculation for the NSA and sVSWR measurements to CISPR 16-1-4	M. Donglin	SEP 15, 2015*
14-06	7.5	To make a proposal for conversion and validation factor for large loop antenna to CISPR 16-1-4	M. Stecher	CLOSED
14-07	8.5	To make specifications of an active loop antenna to CISPR 16-1-4	M. Stecher	FEB 28, 2016
14-08	11.4	To add diameters and termination of the Lead Under Test (LUT) into CISPR 16-1-3	J.Medler	CLOSED

<sup>\*14-05 :</sup> NSA part of the action item is closed, SVSWR part is open.

# Attachment B Tabel 2: Summary of the Action Points arising from the Stresa meeting September 24, 2015

<u>ID</u>	Agenda item	Action	Responsibility	<u>Deadline</u>
15-01	7.1	Prepare text on the validation of the RMS-Average Detector and send to secretary of CISPR/A for publication as a PAS	Medler	CLOSED
15-02	7.1	Prepare a draft proposal for the maintenance of CISPR 16-1-1 and circulate it within WG1	Terrien	MAR 31, 2016
15-03	7.4	Prepare a condensed document on the uncertainty contributions of NSA measurement and circulate it within WG1	Meng	SEP 30, 2016
15-04	7.5	Revise the proposals on conversion and validation factors for large loop antenna and circulate to WG1	Beeckman	FEB 28, 2016
15-05	7.6	Prepare a draft proposal on antenna calibration using time domain for amendment of CISPR 16-1-6 and circulate it within WG1	Schaefer	APR 30, 2016
15-06	7.6	Circulate the proposed text on antenna calibration using time domain that is targeted for the next version of C63.5 within WG1	Schaefer	NOV 30, 2015
15-07	8.2	Prepare a draft proposal on the alternative AAN and circulate it within WG1	Sugiura	SEP 30, 2016
15-08	8.3	Prepare cautionary text on possible overload of an active loop antenna for inclusion in CISPR 16-1-4 and circulate it within WG1	Kriz	DEC 31, 2015
15-09	11.1	Prepare text on cross-polar measurement methods and uncertainty and submit it to CISPR/A chairman	Knight	OCT 31, 2015
15-10	11.1	Prepare an RR to CISPR 16-1-4	Stecher	DEC 31, 2015
15-11	11.2	Prepare a draft proposal on calibration of impedance of V-network to amend CISPR 16-1-2	Kriz	SEP 30, 2016
15-12	11.3	Retrieve previously agreed text on the antenna positioning for NSA measurement and send it to CISPR/A chairman for inclusion in next revision of CISPR 16-1-4	Schaefer	OCT 15, 2015