Proposed revision of VCCI Rules to be implemented from April 2012

Technical Subcommittee

Revision WG

March 22, 2012

Proposed revision of VCCI Agreement to be implemented from April 2012

March 22, 2012 Revision WG

Page	Current text	Revised text	Remarks
	［ORIGINAL：JAPANESE］ V - 3 / 2011. 04 **Normative Annex 1** **TECHNICAL REQUIREMENTS** Enacted: March 27, 1986 Amended: April 1, 2011, 25th Edition Applied from: April 1, 2011	［ORIGINAL：JAPANESE］ V - 3 / 2012. 04 **Normative Annex 1** **TECHNICAL REQUIREMENTS** Enacted: March 27, 1986 Amended: April 1, 2012, 26th Edition Applied from: April 1, 2012	Revised

Tech-46	**6.4.2 Measurement procedure** (10) Measurements at telecommunication ports intended for connection to cables containing more than four balanced pairs or to unbalanced cables, follow item 1.3 of Appendix IV for measurement arrangement and method. In this case the following measurement procedure shall be followed. 1) An appropriate cable shall be used to connect the EUT to the AE. 2) At each frequency of interest, the requirements of 1.3 of Appendix IV shall be met. 3) The type of cable used to connect the EUT to the AE and the length of that cable shall be recorded in the test report. 4) Without decoupling the AE from the EUT, measure the common mode current with a current probe and measure the common mode voltage with a capacitive voltage probe. 5) The AE shall be device(s) typically connected to the telecommunication port under test by a multi conductor cable specified by the manufacturer, or alternatively, a telecommunications port simulation device, or an active device necessary to appropriately exercise the port under test	**6.4.2 Measurement procedure** (10) Measurements at telecommunication ports intended for connection to cables containing more than four balanced pairs or to unbalanced cables, follow item 1.3 of Appendix IV for measurement arrangement and method. In this case the following measurement procedure shall be followed. 1) An appropriate cable shall be used to connect the EUT to the AE. 2) At each frequency of interest, the requirements of 1.3 of Appendix IV shall be met. 3) Measure the common mode current with a current probe and measure the common mode voltage with a capacitive voltage probe. 4) The AE shall be device(s) typically connected to the telecommunication port under test by a multi conductor cable specified by the manufacturer, or alternatively, a telecommunications port simulation device, or an active device necessary to appropriately exercise the port under test	Old 3) deleted as test report form already covers it Error corrected

	6) If AE is not necessary a device that passively terminates the port shall be connected at the AE end of the cable	5) If AE is not necessary a device that passively terminates the port shall be connected at the AE end of the cable	

Tech-55	**6.5.2.5.2 General measurement procedure** For any EUT, preliminary measurement should be performed to grasp the operational conditions and the frequencies of emission that yield maximum field strength (see 6.5.2.6.3) before the final emission test (see 6.5.2.6.4). In performing these measurements, the sensitivity of the measuring instruments relative to the limit shall be checked before the test. If the overall measurement sensitivity is found to be inadequate, it is permissible to employ low noise preamplifiers, closer measurement distances or higher gain antennas. If closer measurement distances or higher gain antennas are employed, the beam width versus size of the EUT shall be taken into account. Also, caution should be exercised not to have the gain saturate the measurement system when preamplifiers are used.	**6.5.2.5.2 General measurement procedure** For any EUT, preliminary measurement should be performed to grasp the operational conditions and the frequencies of emission that yield maximum field strength (see 6.5.2.6.3) before the final emission test (see 6.5.2.6.4). However、the peak detector limits shall not be applied to disturbances produced by arcs or sparks that are high voltage breakdown events. Such disturbances arise when ITE devices contain or control mechanical switches that control current in inductors, or when ITE devices contain or control subsystems that create static electricity (such as paper handling devices). The average limits apply to disturbances from arcs or sparks, and both peak and average limits will apply to other disturbances from such ITE devices. In performing these measurements, the sensitivity of the measuring instruments relative to the limit shall be checked before the test. If the overall measurement sensitivity is found to be inadequate, it is permissible to employ low noise preamplifiers, closer measurement distances or higher gain antennas. If closer measurement distances or higher gain antennas are employed, the beam width versus size of the EUT shall be taken into account. Also, caution should be exercised not to have the gain saturate the measurement system when preamplifiers are used.	Recover a missed text of CISPR-transposed Japanese standard on disturbance caused by sparks and arcs.

Tech-57	**6.5.2.7 Recording of measurement** Record at least the six highest disturbance levels against the limits and their respective frequencies in the test report. Measured data more than 20 dB below the limits need not be recorded.	**6.5.2.7 Recording of measurement** Record the levels and the frequencies of at least the six highest disturbance voltages. Record the antenna polarization for each reported disturbance. Measured data more than 20 dB below the limits need not be recorded.	Recover a missing description on the need for antenna polarization for reported disturbance voltages

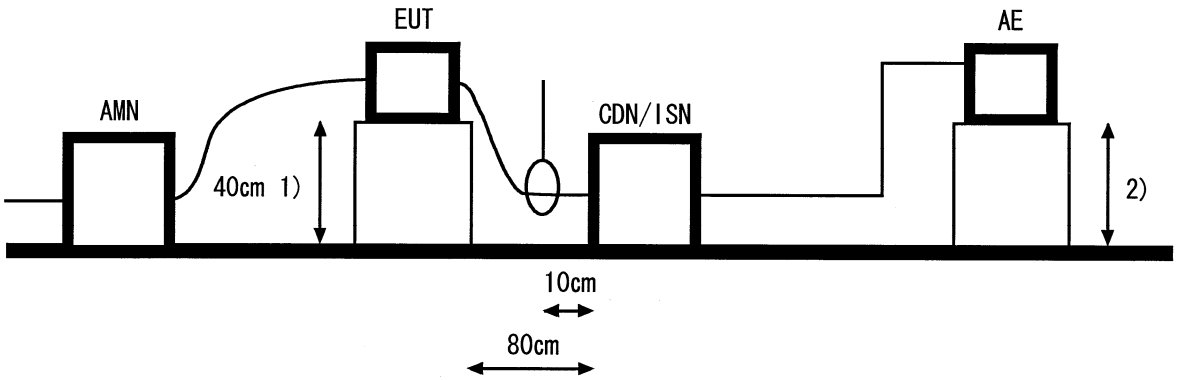
Tech-57	7. **Test Report** The following items shall be included in the test report, 1) a title (e.g. “Test Report” or “Test Result”); 2) the name of the laboratory which performed the test and the name of measurement facility used for the test or VCCI registration number. 3) street address of the laboratory which performed the test or site whose measuring facilities were used 4) the test report number and page number on each page in the form of “n of m” 5) the name of the test requester (company or organization) or VCCI member number; 6) street address of the test requester 7) version number of the VCCI Technical Requirements based on which the test was conducted (and specific item numbers thereof if the volume was partially used) 13) test conditions - name, type number and serial number of measuring instruments and facilities	7. **Test Report** The following items shall be included in the test report, 1) a title (e.g. “Test Report” or “Test Result”); 2) the name of the laboratory which performed the test and the VCCI registration number. 3) street address of the laboratory which performed the test or site whose measuring facilities were used 4) the test report number and page number on each page in the form of “n of m” 5) the name of the test requester (company or organization) or VCCI member number; 6) street address of the test requester 7) version number, including date, e. g., V-3/2012.04 of the VCCI Technical Requirements based on which the test was conducted (and specific item numbers thereof if the volume was partially used) . 13) test conditions - name, model number and serial number or other unique identifier of measuring instruments and facilities.	Deleted the name of the measurement facility because it does not serve the purpose of identifying actual measurement facilities Avoid confusion Match descriptions with those in registration form 106. Other unique identifier can be a proxy of serial number.

Proposed revision of VCCI Agreement to be implemented from April 2012

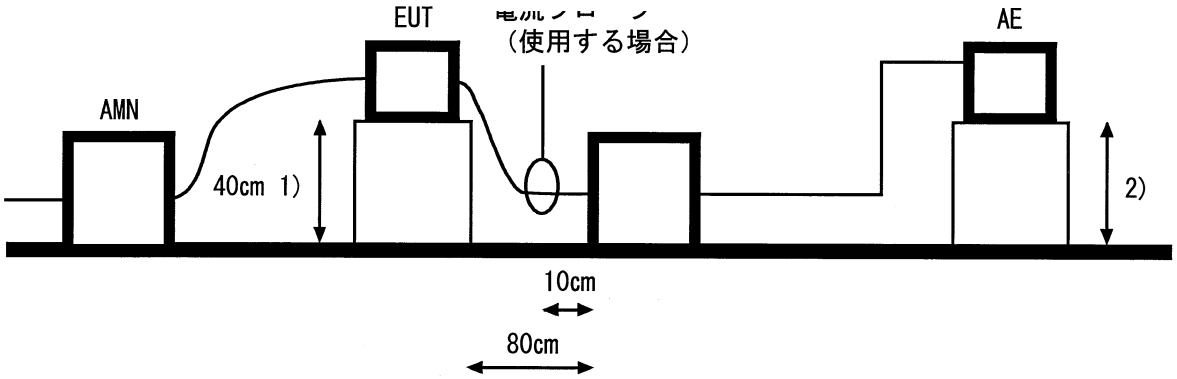
March 22, 2012 Revision WG

Tech-79 Appendix IV	<APPENDIX IV> Enacted: April1 1,2006 Ammended April 1, 2011 5th edition Applied from: April 1, 2011 **Arrangement and Method of Measuring Conductive Disturbance at Telecommunication Ports** **1. Arrangement and measurement** **1.1** Using CDNs (Coupling Decoupling Networks) described in IEC 61000-4-6 or ISNs. This method is used for the case in which ISN defined in 5.2.3 exists. CDN described in IEC 61000-4-6 can also be used in the case in which the EUT is operable in normal manner with CDN inserted in the cable which connects the EUT (1) Connect CDN/ISN directly to the reference metal plane. (2) If voltage measurement is used, measure voltage at the measurement port of the CDN/ISN, correct the reading by adding the CDN/ISN voltage division factor defined in 5.2.3E), and compare to the voltage limit.	<APPENDIX IV> Enacted: April1 1,2006 Amended April 1, 2012 6th edition Applied from: April 1, 2012 **Arrangement and Method of Measuring Conducted Disturbance at Telecommunication Ports** **1. Arrangement and measurement** **1.1** ~~Using CDNs (Coupling Decoupling Networks) described in IEC 61000-4-6 or ISNs. This method is used for the case in which ISN defined in 5.2.3 exists. CDN described in IEC 61000-4-6 can also be used in the case in which the EUT is operable in normal manner with CDN inserted in the cable which connects the EUT~~ (1) Connect ~~CDN/~~ISN directly to the reference metal plane. (2) If voltage measurement is used, measure voltage at the measurement port of the ~~CDN/~~ISN, correct the reading by adding the ~~CDN/~~ISN voltage division factor defined in 5.2.3e), and compare to the voltage limit.	Typo Terminology corrected CDN meeting this standard does not exist. Delete description about the CDN hereafter..

	(3) If current measurement is used, measure current with the current probe and compare to the current limit. A 50 Ω load has to be connected to the measurement port of the CDN/ISN during the current measurement. (4) It is not necessary to apply the voltage and the current limit if a CDN/ISN is used. Note 1: CDN described in IEC 61000-4-6 or JISC C1000-4-6 can be used. Note2: LCL of CDN shall not exceed the value of lower side tolerance of an ISN appropriate for the category of the cable connected to the EUT. Note 3: In some cases, an appropriate CDN or ISN is not available, or the operation of the system is affected by the insertion of the CDN or ISN. Other solutions for measurement without dedicated CDN/ISN are therefore necessary. Item 1.2 throught 1.3 describe possible alternatives. Note4: Where measurement with this method is possible, the method of 1.1 gives the best measurement results with the smallest possible measurement uncertainty.	(3) If current measurement is used, measure current with the current probe and compare to the current limit. A 50 Ω load has to be connected to the measurement port of the ~~CDN/~~ISN during the current measurement. (4) It is not necessary to apply the voltage and the current limit if a ~~CDN/~~ISN is used. ~~Note 1: CDN described in IEC 61000-4-6 or JISC C1000-4-6 can be used.~~ ~~Note2: LCL of CDN shall not exceed the value of lower side tolerance of an ISN appropriate for the category of the cable connected to the EUT.~~ Note 1~~3~~1: In some cases, an appropriate ~~CDN or~~ ISN is not available, or the operation of the system is affected by the insertion of the ~~CDN or~~ ISN. Other solutions for measurement without dedicated ~~CDN/~~ISN are therefore necessary. Item 1.2 and 1.3 describe possible alternatives. Note~~4~~2: Where measurement with this method is possible, the method of 1.1 gives the best measurement results with the smallest possible measurement uncertainty.	

Tech-80	 AE: Associated equipment EUT: Equipment under test 1) Distance to the reference ground plane (vertical or horizontal) 2) Distance to the reference ground plane is not critical **Fig. 1 Measurement method using CDNs described in IEC 61000-4-6 as CDN/ISNs**		Before the revision

ech-80



AE: Associated equipment EUT: Equipment under test

1) Distance to the reference ground plane (vertical or horizontal)

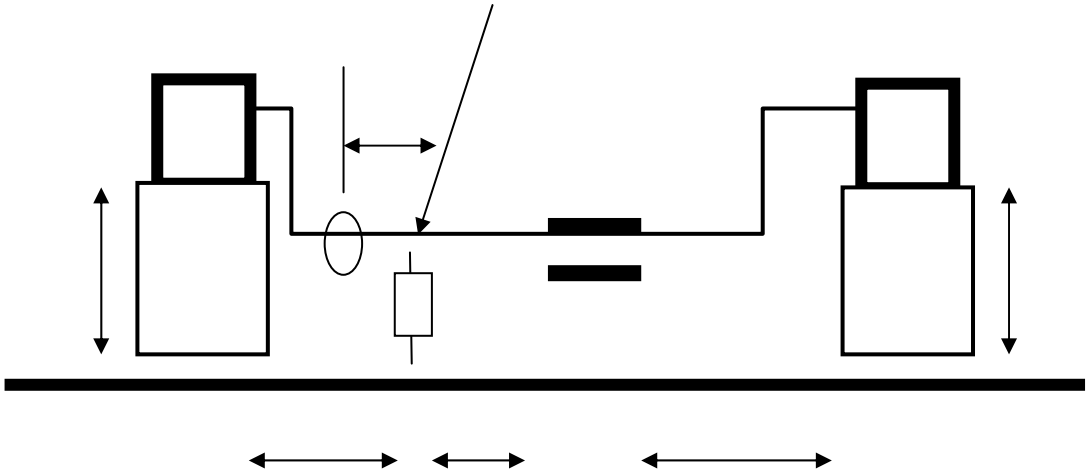
2) Distance to the reference ground plane is not critical

Fig. 1 Measurement method using ~~CDNs described in IEC 61000-4-6 as CDN~~/ISN~~s~~

After the revision

Tech-80	**1.2 Using a 150 Ω load to the outside surface of the shield ("in situ CDN/ISN")**	**1.2 Using a 150 Ω load to the outside surface of the shield ("in situ ~~CDN/~~ISN")**	**Delete description about the CDN hereafter..**

Tech-81



AE: Associated equipment EUT: Equipment under test

1) Distance to the reference ground plane (vertical or horizontal)

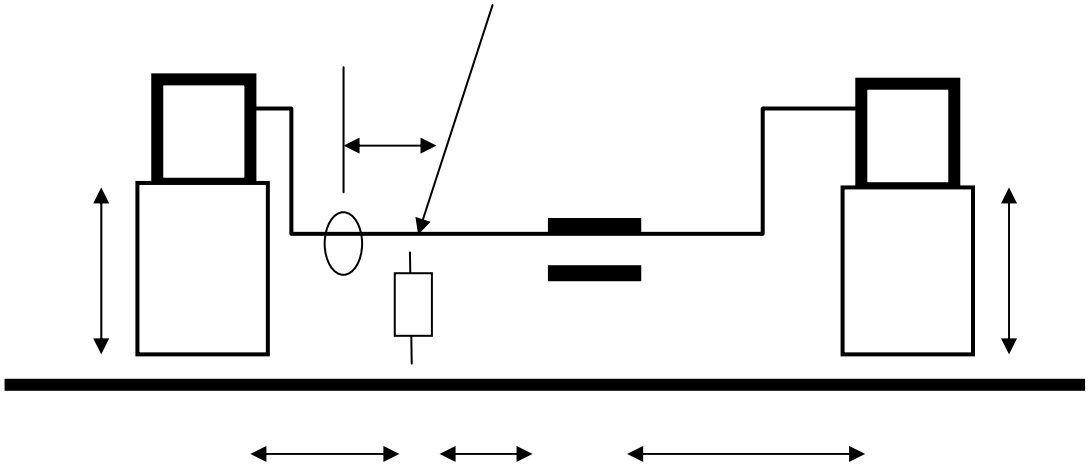
2) Distance to the reference ground plane is not critical

Fig. 2 Measurement method using a 150 Ω load to the outside surface of the shield ("in situ CDN/ISN")

Before the revision

Tech-81

After the revision



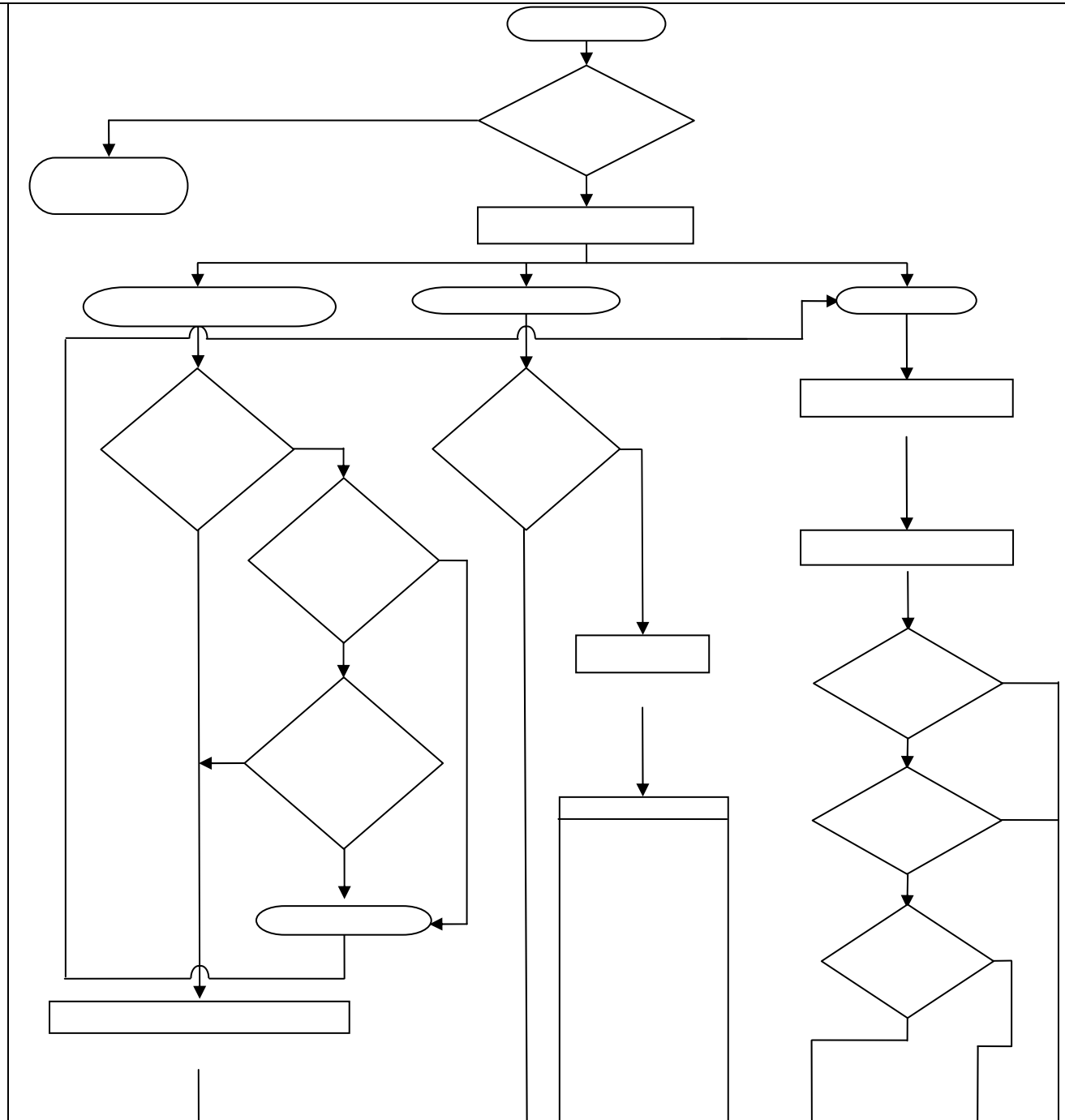
AE: Associated equipment EUT: Equipment under test

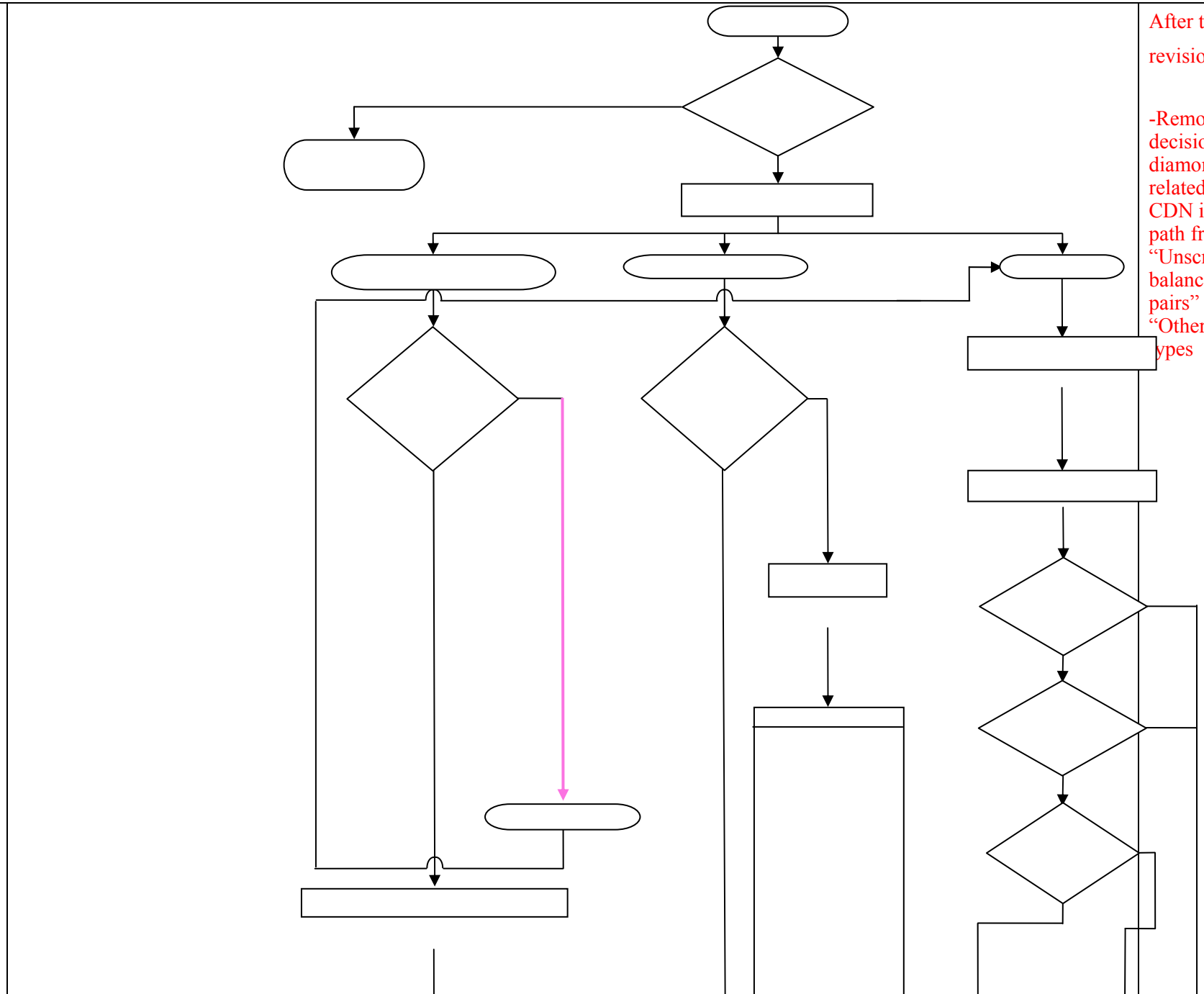
1) Distance to the reference ground plane (vertical or horizontal)

2) Distance to the reference ground plane is not critical

Fig. 2 Measurement method using a 150 Ω load to the outside surface of the shield ("in situ ~~CDN~~ISN")

Page	Current text	Revised text	Remarks
Tech-82	**1. 4 Flow chart for selecting test method**	**1.4 Flow chart for selecting test method**	

Tech-83			Before the revision



After the revision

-Removed decision diamonds related to CDN in the path from "Unscreened balanced pairs" to "Other" port types

Tech-95	**<Appendix V>** **Limits, Measuring Facilities and Measurement Method for Conducted Disturbance at Telecommunication Ports – Old Version (April 2005 Edition)** **Enacted: 2006.04.01** **Ammended April 1, 2011, 5th Edition** **Applied from: April 1, 2011**	**<Appendix V>** **Limits, Measuring Facilities and Measurement Method for Conducted Disturbance at Telecommunication Ports – Old Version (April 2005 Edition)** **Enacted: 2006.04.01** **Amended April 1, 2012, 6th Edition** **Applied from: April 1, 2012**	**Revised**
	Enforcement of limits of conducted disturbance at the telecommunication ports starts from 1st April 2010.	Enforcement of limits of conducted disturbance at the telecommunication ports starts from 1st April 2010 and will end on 3rd March 2013.	Add the date to terminate the grace period for the use of old requirements on telecommunication ports conducted disturbance

(Appendix VIII) CURRENT

2011. 04. 01Enacted
2011. 04. 01 Applied

Selection of ISN for balanced unscreened twisted pair cable

When measuring radiated EMI at a telecommunication port designed to connect balanced unscreened twisted pair cable it is required to use ISN with LCL characteristics corresponding to the category of the cable.

Table 1 below is designed to categorize commonly used telecommunication cables based on their electrical characteristics for the purpose of appropriate selection of balanced pair cables for aimed applications from low to high speed communications.

Categories	Applications	LCL of ISN to be used
Categories 1 and 2	• For voice and low speed data communications • Not generally used for LAN Example: Telephone line	55 dB
Category 3	• Capable of signal transmission up to 16MHz • For voice and data communications up to 10Mbps Examples: IEEE 802.3 10BASE-T, IEEE 802.5 4Mbps Token Ring Network over unshielded twisted pair cable and 25 Mbps ATM-LAN/100VG-Any LAN	55 dB
Category 4	• Capable of signal transmission up to 20MHz • For voice and data communications up to 16Mbps Examples: 16Mbps IEEE 802.5 Token Ring Network over unshielded twisted pair cable	55 dB
Category 5	• Capable of signal transmission up to 100MHz • For voice and data communications up to 100Mbps Examples: CDDI, 100BASE-TX, 156 Mbps ATM-LAN and 1000BASE-T *CCDI: Copper Distributed Data Interface	65 dB
Category 6	• Capable of signal transmission up to 250MHz • For voice and data communications up to 1Gbps Examples: 1000BASE-T/TX and 1.2 Gbps ATM-LAN	75 dB

Note 1: Category 5e should be used ISN with 65dB, category 6e and 6a should be used ISN with 75dB.

Note 2: Category 7 is generally used with screened twisted pair cable. Measure with flow chart of Fig 4 of Appendix IV.

Note 3: LCL value of ISN to be used is derived from characteristics of LCL of ISN at 150KHz prescribed in 5.2.3

Table 1 Table of balanced unscreened twisted pair cables

It should be noted that item (6), 6.4.2 says the following.
When disturbance voltage measurements are performed on a single unscreened balanced pair, an adequate ISN for two wires shall be used; when performed on unscreened cables containing two balanced pairs, an adequate ISN for four wires shall be used; when performed on unscreened cables containing four balanced pairs, an adequate ISN for eight wires shall be used (refer to 5.2.3).

The above note indicates that ISN should be selected based not on the number of pairs actually used but on the number of physical pairs of the cable. However, further consideration is necessary to select an optimum ISN from ISN configuration examples in Appendix IV. Since ISN examples in Figures 8 through 11 apply to the case in which all balanced pairs in the cable are in the active state, detailed knowledge will be needed about EUT port under test. On the other hand ISN configuration examples in Figures 6 and 7 are serviceable in the case in which actual use status on the pair is not known because the examples do not have any such restrictions. Also the same two configuration examples are good for measurement of unscreened balanced pair cables whose number is fewer than maximum number of pairs the ISN has (see example 2).

The following descriptions are provided to promote understanding of “active pair” used in this appendix.
“Active pair” is defined to be a copper pair making up active digital, analogue or power circuit* or a pair of wire in the state of being terminated with prescribed impedance, grounded or connected to a frame or chassis.
* Note: These circuits include Power Over Ethernet

A circuit in the state of performing prescribed functions is referred to as “active circuit” The functions include communication, detection of voltage/current, impedance matching and power supply.
Note: Leads not used in prescribed functions are not part of active circuit.

EMI measurement using ISN indicated in Figures 8 through 11 may cause serious errors in the measurement if not all of pairs are in the state of active. Therefore, it is vital for testing laboratories to decide which ISN to use out of configuration examples in Appendix IV. A working steps go as follows. See if target ISN is appropriate for the port under test or if there will be a need to use alternative measurement techniques. Prior to this consideration, estimate the number of active pairs in a given cable, if the estimation is needed. These steps shall be followed in the measurement based on 6.4.2.

It is recommended the following be recorded in the test report.

- Model name of the ISN used and its LCL, Total number of pairs physically accommodated in the cable and the number of active pairs

Example 1

A certain EUT has an Ethernet port to which category 5 or 6 cable is to be connected. These cables are generally made of four pairs, so a 4-pair ISN can be a choice. All the four pairs will be used in the transmission based on 1000 Base-T Ethernet protocol. However, only two pairs of the four will be used in 10 Base-T and 100 Base-T Ethernet protocols. So in this example either of the following ISNs can be used.

1. ISN as indicated in Figure 7
2. ISN as indicated either in Figure 10 or 11 if all the pairs of the cable are known to be active. This is the case of 1000 Base-T protocol. However, the same ISN can be used even for 10 Base-T or 100 Bas-T protocols if unused pairs are terminated at the EUT in design which will make all pairs active from the standpoint of EMC.

If a cable with only two pairs can be procured for the Ethernet port of the EUT in question, either of the ISNs in Figures 6 ,8, and 9 can be used. In case of Figure 7, it is suitable for measure less pair of cables than ISN's maximum pair.

Example 2

Here is an EUT with an ADSL port connected to a cable with two pairs. Since ADSL only uses one pair the remaining pair is not active. In this case ISN indicated either in Figure 6 or Figure 7 can be used.

Proposed revision of VCCI Agreement to be implemented from April 2012

February 29, 2012 Revision WG

(Appendix VIII) REVISED

2011. 04. 01Enacted

2011. 04. 01 Applied

2012.04.01 Amended

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Note 2: Category 7 is generally used with screened twisted pair cable. Measure with flow chart of Fig 4 of Appendix IV.

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* Note: These circuits include Power Over Ethernet

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It is recommended the following be recorded in the test report.

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Normative Annex 1-4

V-8/2012.04
Established 2012-04-01
Effectuated 2012-04-01

Guidelines for Measuring Conducted EMI at Telecommunication Ports

1. Purpose

This guideline was developed to familiarize VCCI members with the reason why results of measurement of telecommunication ports conducted EMI differs from measuring site to measuring site, and to show how to reduce the differences as much as possible so that members can make appropriate arrangement for testing.

It should be noted that the content of this guideline is subject to change by revision of Technical Requirements, amendment to related international standards and by other factors.

2. Main cause for making differences in measurement results and selection of variables to minimize the differences

Causes for getting different results of measurement were analyzed with the cooperation of four testing laboratories commissioned to do market sampling test. From the resulted findings a conclusion was drawn that certain combinations of the following five variables with regard to setting of testing conditions and parameters are good for minimizing the differences in disturbance level readings.

- Measurement method
- Selection of ISN
- Transmission rate (communication mode)
- Grounding of EUT and peripheral equipment
- Software to run the communication

Consideration points summarized below on the above five variables are given in Section 3 and after.

(1) Selection of measurement method

Method of measurement is determined by the kind of cables connected to the target telecommunication ports. 【Procedure 1】in Section 3 indicates a flow chart for the selection of measurement method based on the kind of ports subject to measurement.

(2) Selection of ISN

When measuring telecommunication ports conducted EMI by using ISN appropriate ISN should be selected in accordance with cable category, whether or not cables are screened and the number of circuits in the cable. 【Procedure 2-1】 in Section 4 gives a flow chart for the selection of ISN with focus on the cable category and on whether or not the cable is screened. 【Procedure 2 - 2】 in Section 5 gives a flow chart for the selection of ISN with focus on the numbers of circuits and active circuits. This section also gives definition of active circuit and interpretation as to a circuit "being active." In the end of section 5 Quick Reference on ISN selection is given as a summary of 【Procedure 2-1】 and 【Procedure 2 - 2】. For cases that are not found in the Quick Reference these two procedures should be referenced.

(3) Selection of transmission rate (communication mode)

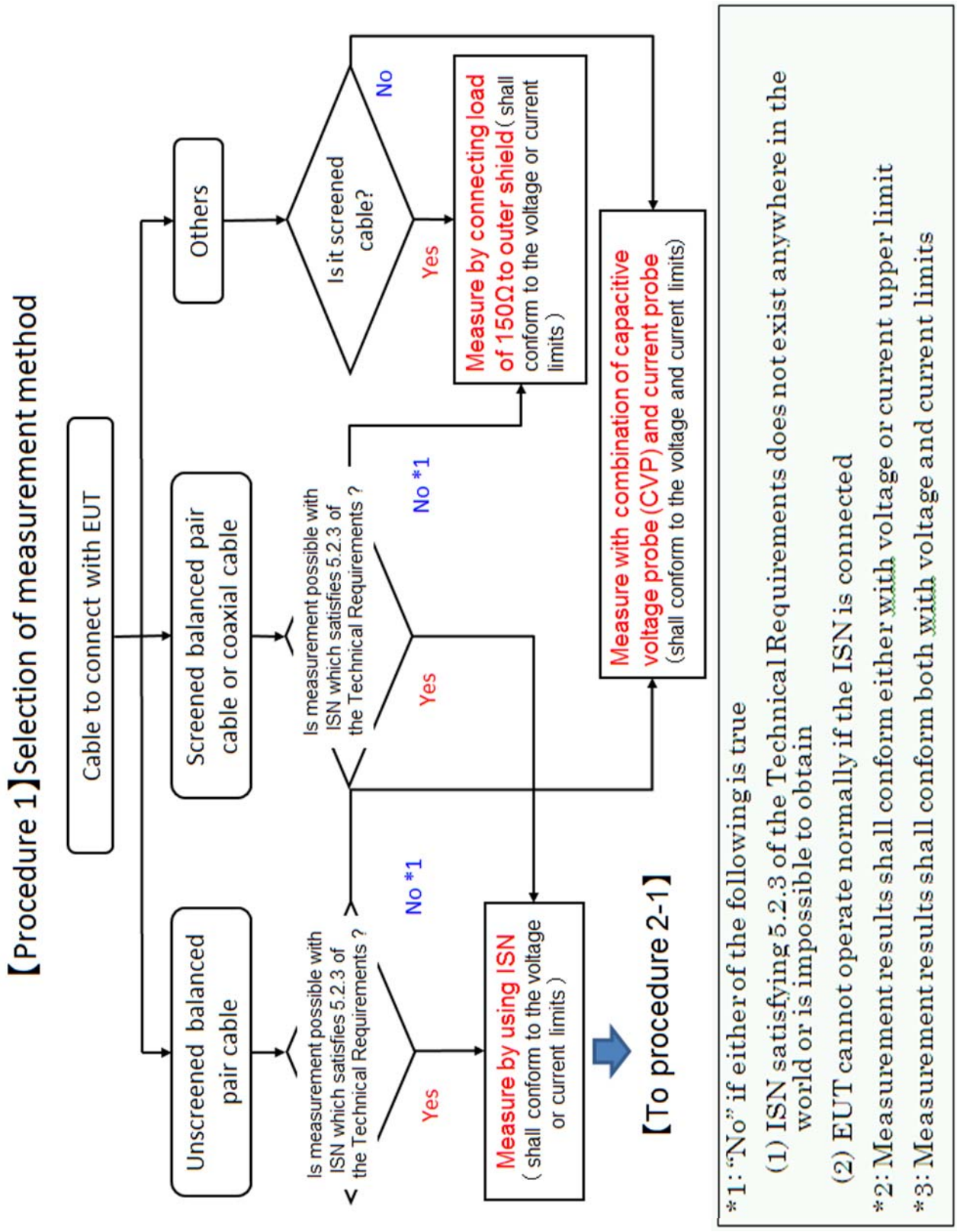
【Procedure 3】in Section 6 gives a guide on the selection of variables in case the transmission rate or communication mode is selectable.

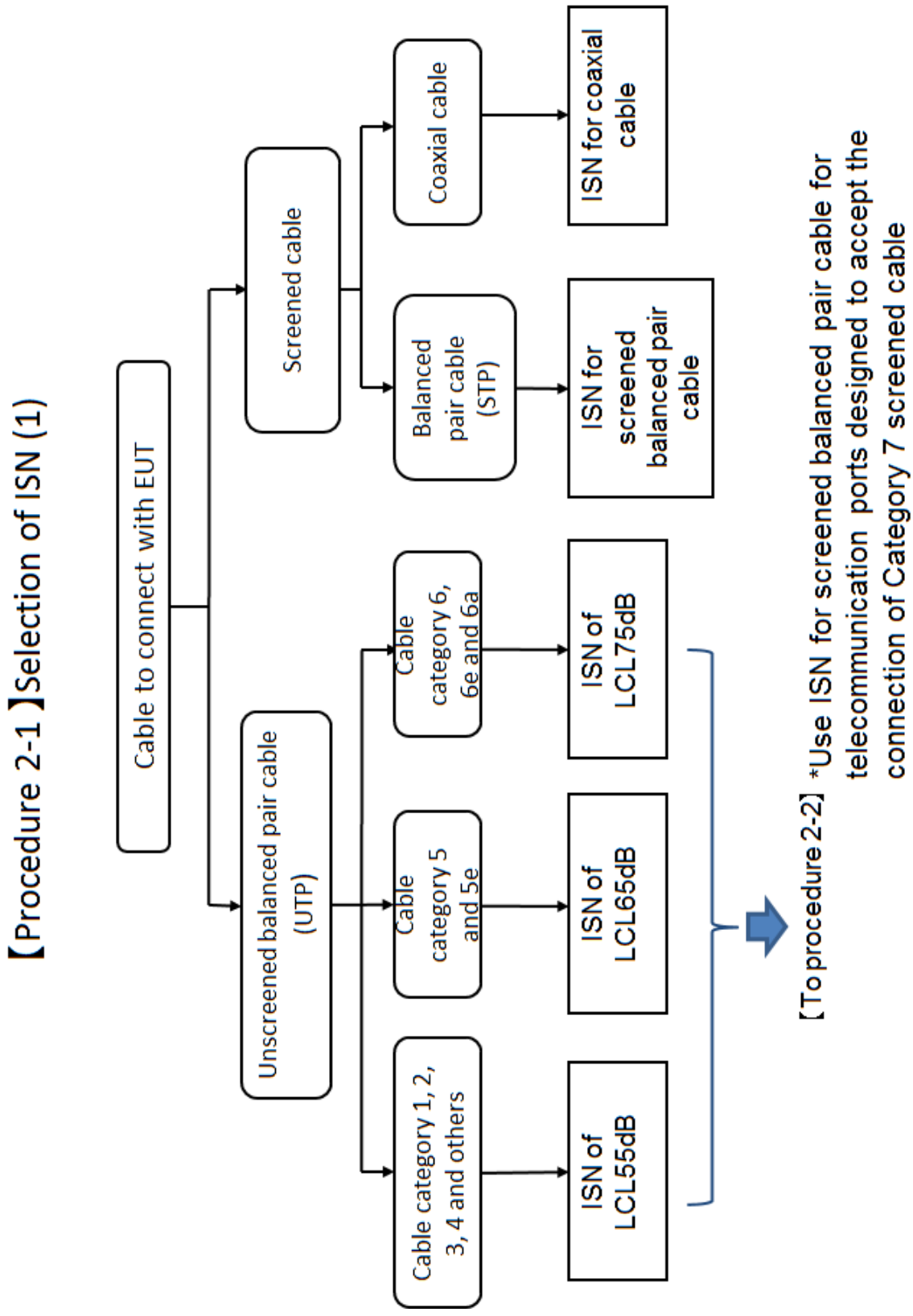
(4) Grounding of EUT and peripheral equipment

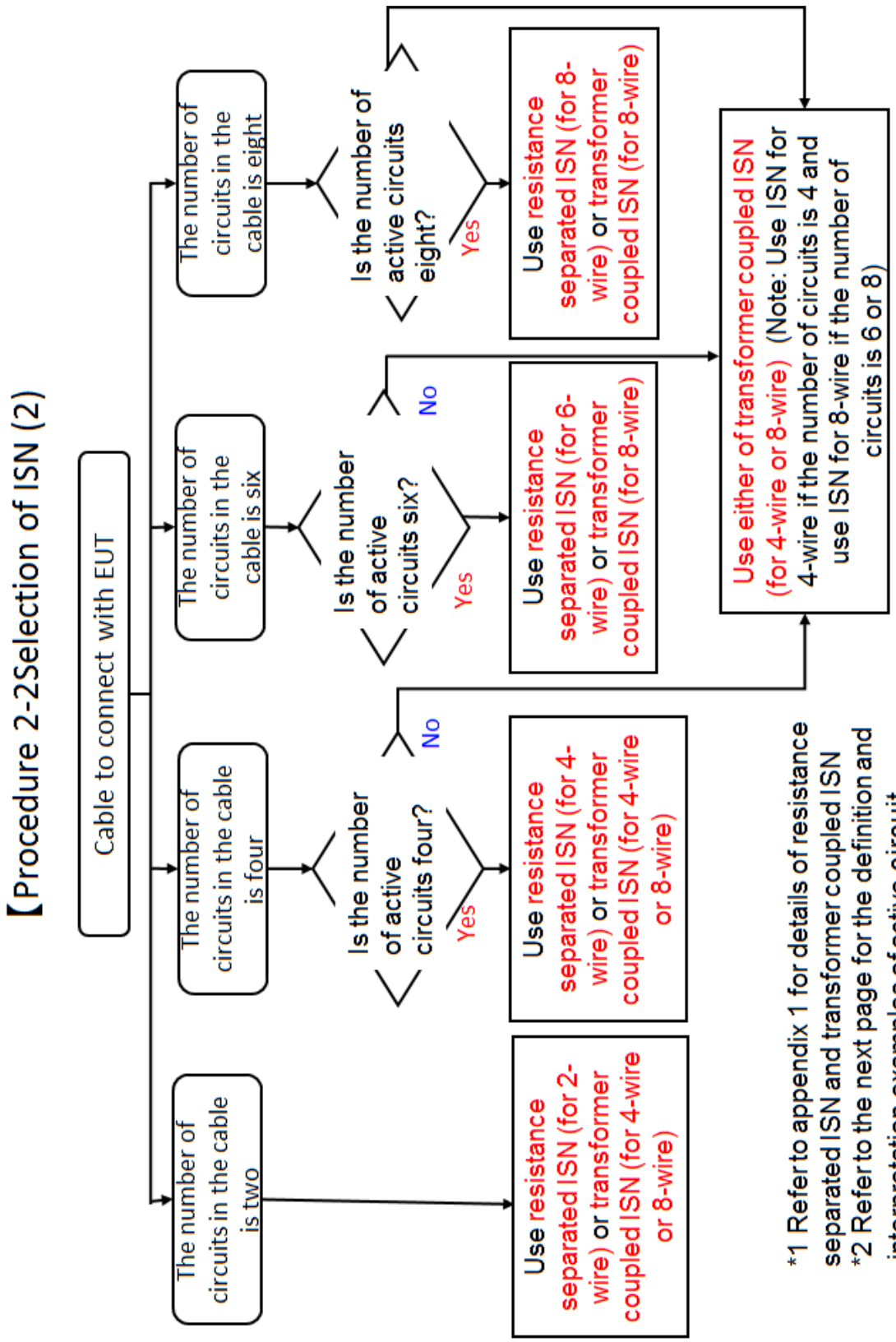
Disturbance level is affected by grounding of EUT, peripheral equipment and associated equipment. 【Procedure 4】 in Section 7 gives a guidance on the grounding.

(5) Selection of software to run the communication

Disturbance level is affected by kind of communication program employed. Section 8 gives guidance on the selection of program and on consideration points to run tests in the same condition between laboratories.


【Procedure 1】Selection of measurement method
Cable to connect with EUT
Unscreened balanced pair cable
Screened balanced pair cable or coaxial cable
Others
Is measurement possible with ISN which satisfies 5.2.3 of the Technical Requirements ?
Yes
No *1
Measure by using ISN (shall conform to the voltage or current limits)
Is measurement possible with ISN which satisfies 5.2.3 of the Technical Requirements ?
Yes
No *1
Measure with combination of capacitive voltage probe (CVP) and current probe (shall conform to the voltage and current limits)
Is it screened cable?
Yes
No
Measure by connecting load of 150Ω to outer shield (shall conform to the voltage or current limits)
【To procedure 2-1】
*1: "No" if either of the following is true
(1) ISN satisfying 5.2.3 of the Technical Requirements does not exist anywhere in the world or is impossible to obtain
(2) EUT cannot operate normally if the ISN is connected
*2: Measurement results shall conform either with voltage or current upper limit
*3: Measurement results shall conform both with voltage and current limits


【Procedure 2-1 】Selection of ISN (1)
Cable to connect with EUT
Screened cable
Coaxial cable
ISN for coaxial cable
Balanced pair cable (STP)
ISN for screened balanced pair cable
Unscreened balanced pair cable (UTP)
Cable category 6, 6e and 6a
ISN of LCL75dB
Cable category 5 and 5e
ISN of LCL65dB
Cable category 1, 2, 3, 4 and others
ISN of LCL55dB
【To procedure 2-2】 *Use ISN for screened balanced pair cable for telecommunication ports designed to accept the connection of Category 7 screened cable


【Procedure 2-2Selection of ISN (2)
Cable to connect with EUT
The number of circuits in the cable is two
Use resistance separated ISN (for 2-wire) or transformer coupled ISN (for 4-wire or 8-wire)
The number of circuits in the cable is four
Is the number of active circuits four?
Yes
Use resistance separated ISN (for 4-wire) or transformer coupled ISN (for 4-wire or 8-wire)
No
The number of circuits in the cable is six
Is the number of active circuits six?
Yes
Use resistance separated ISN (for 6-wire) or transformer coupled ISN (for 8-wire)
No
The number of circuits in the cable is eight
Is the number of active circuits eight?
Yes
Use resistance separated ISN (for 8-wire) or transformer coupled ISN (for 8-wire)
Use either of transformer coupled ISN (for 4-wire or 8-wire) (Note: Use ISN for 4-wire if the number of circuits is 4 and use ISN for 8-wire if the number of circuits is 6 or 8)
*1 Refer to appendix 1 for details of resistance separated ISN and transformer coupled ISN
*2 Refer to the next page for the definition and interpretation examples of active circuit

Definition and interpretation of examples of "active circuit" discussed in the flow chart of 【Procedure 2-2】 is given in the following..

(1) "Active circuit" (English translation of an excerpt from Appendix I, CISPR22 Ed 6 transposed into Japanese Standard – partially modified)

Active circuit is defined to be half of a pair of copper wire making up digital path, analog path or power supply in active state, terminated with specified impedance, grounded, or connected with frame or chassis of equipment. "Active" here means the state of engaging in intended functions including communication, detection of voltage and current, impedance matching and power supply.

(2) Examples of circuits interpreted as active

Shown hereunder are examples of active circuits interpreted as active with Ethernet as a model. Cases here are limited to those using "resistance separated ISN." In case of using "transformer coupled ISN" use ISN able to accommodate all circuits, active or inactive.

① Ethernet ports enabling of 1000 Base-T, 100 Base-TX and 10 base-T communications is interpreted as having 8 active circuits because all 8 circuits of 4 pairs are connected with a pulse transformer.

② Ethernet ports enabling of 100 Base-TX and 10 base-T communications with spare of 2 pairs – 4 circuits terminated with arbitrary impedance or grounded to chassis is interpreted as having 8 active circuits.

③ Ethernet ports enabling of 100 Base-TX and 10 base-T communications with spare of 2 pairs – 4 circuits which are open-ended is interpreted as having 4 active circuits.

【Procedure 2-2 Selection of ISN annex3】Procedure 2-2 Selection of ISN

- Quick Reference for the selection of ISN

Numbers in this table correspond to numbers on ISN configuration chart in Normative Annex IV Technical Requirements

							Resistance separated ISN	Transformer coupled ISN		Resistance separated ISN							
	No.	Screened or unscreened	Connector	Cable category	The number of circuits in the cable	The number of active circuits	Figure 5 unscreened balanced pair cable	Figure 6 unscreened balanced pair or 2-pair cable	Figure 7 unscreened balanced pair, 2-pair, 3-pair or 4-pair cable	Figure 8 unscreened balanced 2-pair cable	Figure 9 unscreened balanced 2-pair cable	Figure 10 unscreened balanced 4-pair cable	Figure 11 unscreened balanced 4-pair cable	Figure 12 coaxial cable	Figure 13 coaxial cable	Figure 14 Screened multiple-pair cable	Figure 15 Screened multiple-pair cable
Condition(Cable - EUT interface specifications)	1	UTP	RJ45 (LAN)	Cat6	8W	8W			●			●	●				
	2			Cat5e Cat5					●			●	●				
	4					4W			●								
	5				4W			●	●	●	●						
	6			Cat3	8W	8W			●			●	●				
	7					4W			●								
	8				4W			●	●	●	●						
	9		RJ11 (TEL)	Cat3	6W	6 / 4/2W			●								
	11				4W	4/2W		●	●	●	●						
	13				2W	2W	●	●	●								
	14	STP	RJ45 (LAN)	Cat7	8W											●	●
	15			Cat6												●	●
	16			Cat5e Cat5												●	●
	17				4W											●	●
	18			Cat3												●	●
	19		oaxial cable	oaxial cable	1W												

6. 【Procedure 3】 Selection of Transmission rate (communication mode)

In case where telecommunication port subject to measurement is capable of communication at multiple transmission rates (communication mode), then EMI measurement shall be done with transmission rate to cause strongest disturbance in a typical use example (Source FAQ). This is because in a case of EUT capable of transmission in 100Base-TX and 1000Base-T the frequency to give out maximum disturbance may be different in the two modes. So typical use example should be employed at the measurement.

7. 【Procedure 4】Grounding of EUT and peripheral equipment

It is well known that level of disturbances differs with or without grounding is done for EUT, peripheral equipment and auxiliary equipment. The following cases are such examples.

- A return path with low impedance is created by grounding in addition to telecommunication ports connected to ISN, which reduces disturbance levels
- Disturbances emitted from peripheral equipment flow into telecommunication ports of EUT by grounding so that disturbance level increases

In order to avoid such situations grounding for EUT, peripheral equipment and associated equipment shall be done in the same way as in ordinary typical operations. It is a matter of course in this case that the configuration and arrangement of EUT, peripheral equipment and associated equipment meet Technical Requirements.

8. 【Others】 Software used for communication

Disturbance level changes by software controlling communications. Therefore, measurement shall be conducted by paying attention to the following.

- Select software for communication based on the typical usage
- Make a test report which covers communication variables and parameters at the time of measurement such as transmission mode (100Base-T Ethernet protocol etc.), type and size of transmitted data, transmission rate, category and length of cables to connect AE. Such data will help conduct inter laboratory comparison under the same condition.

【Appendix 1】Kinds of ISN

What follows is explanation of kinds of ISN discussed in this guidelines. In case it is not clear as to which ISN in hand corresponds to the ISN listed here, contact the manufacturer or appropriate supplier.

- Resistance separated ISN (2-wire)
  ISN meeting the configuration given in Figure 5 of Technical Requirements

- Resistance separated ISN (4-wire)
  ISN meeting the configurations given in Figures 8 and 9 of Technical Requirements. It is applicable only to the case with the number of active circuits is four.

- Resistance separated ISN (8-wire)
  ISN meeting the configurations given in Figures 10 and 11 of Technical Requirements. It is applicable only to the case with the number of active circuits is eight

- Transformer coupled ISN (4-wire)
  ISN meeting the configuration given in Figure 6 of Technical Requirements. It is applicable to the case with the number of active circuits is four or two

- Transformer coupled ISN (8-wire)
  ISN meeting the configuration given in Figure 7 of Technical Requirements. It is applicable to the case with the number of active circuits is eight, six, four or two

CALIB-1	Normative Annex 1-3 **CALIBRATION AND INSPECTION OF MEASUREMENT EQUIPMENT** Enacted:June 14, 1994 Amended: April 1, 2009 5th edition Applied from: April 1, 2009	Normative Annex 1-3 **CALIBRATION AND INSPECTION OF MEASUREMENT EQUIPMENT** Enacted:June 14, 1994 Amended: April 1, 2012 6th edition Applied from: April 1, 2012	**Revised**

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CALIB-7	2.3.2 Mean value measurement function (applicable only to the measuring equipment for Band B) ① Accuracy of sine-wave voltage Evaluate the measurement accuracy of the sine-wave voltage in accordance with Paragraph 6.3 of CISPR 16-1-1:2003. Calibration shall be conducted at the following frequencies (deviation of up to 5% is allowed): Band B (0.15 - 30 MHz): 0.15, 1, 10, and 30 MHz ② Pulse response characteristics Conduct the absolute value calibration provided for in 6.4 of CISPR 16-1-1:2003 at any single frequency in the frequency band for Band B. Note: As noted in 2.3.1 (2), in addition to the "pulse" provided in CISPR, a pulsed RF signal equivalent to the dc pulse can be used.	2.3.2 Mean value measurement function ① Accuracy of sine-wave voltage Evaluate the measurement accuracy of the sine-wave voltage in accordance with Paragraph 6.3 of CISPR 16-1-1:2003. Calibration shall be conducted at the following frequencies (deviation of up to 5% is allowed): Band B (0.15 - 30 MHz): 0.15, 1, 10, and 30MHz Band E (1 - 6GHz) 1, 2, 3. 4. 5 and 6GHz ② Pulse response characteristics Conduct the absolute value calibration provided for in 6.4 of CISPR 16-1-1:2003 at any single frequency in the frequency band for Band B. Note: As noted in 2.3.1 (2), in addition to the "pulse" provided in CISPR, a pulsed RF signal equivalent to the dc pulse can be used. As to Band E it is necessary to confirm that 1MHz measurement bandwidth (impulse bandwidth B_{imp}) in Band E (1 – 6GHz) is contained within ±10% of that which is prescribed in 5.2.1 of CISPR 16-1-1 Ed. 2.1: 2006 (Ed. 3: 2010)	Added requirements for calibration and other precautions above 1GHz

CALIB-7	2.3.3 Peak measurement functions ① Accuracy of sine-wave voltage Evaluate the measurement accuracy of the sine-wave voltage in accordance with Paragraph 5.3 of CISPR 16-1-1:2003. Calibration shall be conducted at the following frequencies(deviation of up to 5% is allowed): Band B (0.15 - 30 MHz): 0.15, 1, 10, and 30 MHz Band C/D (30 - 1000 MHz) 30, 100, 300, 1000 MHz	2.3.3 Peak measurement functions ① Accuracy of sine-wave voltage Evaluate the measurement accuracy of the sine-wave voltage in accordance with Paragraph 5.3 of CISPR 16-1-1:2003. Calibration shall be conducted at the following frequencies(deviation of up to 5% is allowed): Band B (0.15 - 30 MHz): 0.15, 1, 10, and 30 MHz Band C/D (30 - 1000 MHz) 30, 100, 300, 1000 MHz Band E (1 - 6GHz) 1, 2, 3. 4. 5 and 6GHz	Added requirements for calibration and other precautions above 1GHz

CALIB-7	② Pulse response characteristics Conduct the absolute value calibration provided for in 4 of CISPR 16-1-1:2003 at any single frequency in each frequency band. The repetition frequencies of the pulses are as follows: Band B (0.15 - 30MHz): 25Hz Band C/D (30 - 1000MHz): 100Hz Note: Equivalent "Pulsed FR signal" can be used besides the pulse specified by CISPR, as described in Note in ② of above 2.3.1.	② Pulse response characteristics Conduct the absolute value calibration provided for in 4 of CISPR 16-1-1:2003 at any single frequency in each frequency band. The repetition frequencies of the pulses are as follows: Band B (0.15 - 30MHz): 25Hz Band C/D (30 - 1000MHz): 100Hz Note: Equivalent "Pulsed FR signal" can be used besides the pulse specified by CISPR, as described in Note in ② of above 2.3.1. As to Band E it is necessary to confirm that 1MHz measurement bandwidth (impulse bandwidth B_{imp}) in Band E (1 – 6GHz) is contained within ±10% of that which is prescribed in 5.2.1 of CISPR 16-1-1 Ed. 2.1: 2006 (Ed. 3: 2010)	

CALIB-8		2.6 Voltage probe 2.6.1 High impedance voltage probe Shall be calibrated for insertion loss in 50Ω system in the frequency range 150KHz – 30MHz. 2.6.2 Capacitive voltage probe Frequency response of the voltage division factor shall be calibrated in accordance with Annex G of CISPR 16-1-2:2006 Specification for radio disturbance and immunity measuring apparatus and methods – Ancillary equipment – Conducted disturbances. Capacitive voltage probe is considered susceptible to the influence of external electric field. To know whether or not additional shielding is required Annex G of the above mentioned CISPR standard should be referenced.	Added calibration requirements and other precautions for voltage probe

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age	Current text	Revised text	Remarks
Registration-1	[ORIGINAL:JAPANESE] NORMATIVE ANNEX2 **V-5 / 2011. 04** **RULES FOR REGISTRATION OF MEASUREMENT FACILITIES** Enacted : October 1, 1992 Amended: April 1, 2011, 17th Edition pplied from: April 1, 2011	[ORIGINAL:JAPANESE] NORMATIVE ANNEX2 **V-5 / 2012. 04** **RULES FOR REGISTRATION OF MEASUREMENT FACILITIES** Enacted : October 1, 1992 Amended: April 1, 2012, 18th Edition Applied from: April 1, 2012	

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Registration -1	Article 3 ├ Application for Registration by Examination: The member wishing to register his measurement facilities to the Council shall first assure that his facilities meet the Requirements of Registration specified in Article 4 and then submit an application package for each facility in accordance with Normative Annex 2-2 “Outline how to fill Registration Documents of Measurement Facilities” to the Council together with the examination fees. Application package is comprised of "Application for Registration of Measurement Facility" (Forms 101, 101G, 102A, and 102B), "the Application Supplement for Registration of Measurement Facility" (in the forms specified in the above forms), and data to be attached (measurements of site attenuation and site validation by site VSWR method) which are not older than 6 months before the application). As to the examination fee the member can pay it later by means of transferring to the bank account specified by the Council upon the reception of a bill for it.	Article 3 ├ Application for Registration by Examination: The member wishing to register his measurement facilities to the Council shall first assure that his facilities meet the Requirements of Registration specified in Article 4 and then submit an application package for each facility in accordance with Normative Annex 2-2 “Outline how to fill Registration Documents of Measurement Facilities” to the Council together with the examination fees. Application package is comprised of "Application for Registration of Measurement Facility" (Forms 101, 101G, 102A, and 102B), "the Application Supplement for Registration of Measurement Facility" (in the forms specified in the above forms), and data to be attached (measurements of site attenuation and site validation by site VSWR method) which are not older than 6 months before the application). As to the examination fee the member can pay it later by means of transferring to the bank account specified by the Council upon the reception of a bill for it. Note that if application is made based on Article 15 it is not necessary to follow Article 3.	Added

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Page	Current text	Revised text	Remarks
Registration-3	Article 8 - Valid Period of Registration: 1) The valid period of the certificate of registration that has been issued in accordance with Article 7 shall be 3 years. If, following receipt of the application for renewal, the Registration should lapse during the examination by the Council (including reexamination for the improvement), the Council shall extend the valid period for the certificate of registration until the examination is concluded, up to a maximum of 6 months. In this case certificate of registration will not be issued.	Article 8 - Valid Period of Registration: 1) The valid period of the certificate of registration that has been issued in accordance with Article 7 shall be 3 years. If, following receipt of the application for renewal, the Registration should lapse during the examination by the Council (including reexamination for the improvement), the Council shall extend the valid period for the certificate of registration until the examination is concluded, up to a maximum of 6 months. In this case certificate of registration will not be issued.	

	2) The valid period of the certificate of registration that has been issued in accordance with Articles 14 and 15 shall be as follows respectively. Article 14-effected certificate: the period not exceeding the valid period set by the foreign institution Article 15-effected certificate: the period granted in the accreditation by the laboratory accreditation body This rule for valid period is also applies to the renewal of registration prescribed in Article 10. If the Article 14-effected valid period has expired while the Council is conducting assessment of application for registration renewal (or reassessment for improvement) the Council extends the valid period of registration for maximum 6 months provided that renewal application had been filed to the foreign institution before the expiry and its approval is expected. If in the case of Article 15-effected certificate the laboratory accreditation body can not complete the renewal of registration before the expiry, the Council extends the valid period of registration for maximum 6 months. In this case certificate of registration will not be issued.	2) The valid period of the certificate of registration that has been issued in accordance with Articles 14 and 15 shall be as follows respectively. Article 14-effected certificate: the period not exceeding the valid period set by the foreign institution Article 15-effected certificate: the period granted in the accreditation by the laboratory accreditation body This rule for valid period is also applies to the renewal of registration prescribed in Article 10. If the Article 14-effected valid period has expired while the Council is conducting assessment of application for registration renewal (or reassessment for improvement) the Council extends the valid period of registration for maximum 6 months provided that renewal application had been filed to the foreign institution before the expiry and its approval is expected. In this case certificate of registration will not be issued. If in the case of Article 15-effected certificate the laboratory accreditation body can not complete the renewal of registration before the expiry for which it accepted the renewal application, the Council extends the valid period of registration for maximum 6 months. In this case certificate of registration will not be issued.	

Registration-6	Article 14 - Registration of Measurement Facility Approved by Foreign Institutions: 1) If a Member desires to register a measurement facility that has been approved by an institution of a foreign country listed in item 2) of this article which employs standards equivalent to the CISPR recommendations in its operations, the Member may apply for registration of the facility in the following way instead of the way described in Article 3. That is, the member prepares the required documents and submits them to the Council together with the fee for examining the registration. The required documents in this case are “Application for Registration of Measurement Facility” (Forms 151 and 152A) that bears the name of the institution and used standards for approval, "Application Supplement for Registration of Measurement Facility", a complete set of copies of the application documents submitted to the institution (including the documents for the first Registration and its renewal) and a copy of certificate proving the approval. However, if it is difficult to pay the examination fee at the time of application filing, the Member shall pay on receipt of bill the fee into a specified bank account.	Article 14 - Registration of Measurement Facility Approved by Foreign Institutions: 1) If a Member desires to register a measurement facility that has been approved by an institution of a foreign country listed in item 2) of this article which employs standards equivalent to the CISPR recommendations in its operations, the Member may apply for registration of the facility in the following way instead of the way described in Article 3. That is, the member prepares the required documents and submits them to the Council together with the fee for examining the registration. The required documents in this case are “Application for Registration of Measurement Facility” (Forms 151 and 152A) that bears the name of the institution and used standards for approval, "Application Supplement for Registration of Measurement Facility", a complete set of copies of the application documents submitted to the institution (including the documents for the first Registration and its renewal) and a copy of certificate proving the approval. However, if it is difficult to pay the examination fee at the time of application filing, the Member shall pay on receipt of bill the fee into a specified bank account.	

	If telecommunication ports measurement facilities and radiation measurement facilities above 1GHz including site validation method, are out of approval scope of the foreign institution, then the Member shall additionally register his telecommunication ports/radiation measurement facilities above 1GHz measurement facility. The Council administers Article 5 by giving credit to the result of examination by the foreign institution which supersedes the requirements stipulated in Article 4. Upon completion of examination the Council notifies the Member of the result in accordance with Article 6.. If the result is “approval” the Council issues a certificate of facility registration in accordance with Article 7. The application for renewal of the registration shall be handled in accordance with item 2 of Article 10.	The Council administers Article 5 by giving credit to the result of examination by the foreign institution which supersedes the requirements stipulated in Article 4. Upon completion of examination the Council notifies the Member of the result in accordance with Article 6.. If the result is “approval” the Council issues a certificate of facility registration in accordance with Article 7. The application for renewal of the registration shall be handled in accordance with item 2 of Article 10. If telecommunication ports measurement facilities and radiation measurement facilities above 1GHz including site validation method, are out of approval scope of the foreign institution, then the Member shall additionally register his telecommunication ports/radiation measurement facilities above 1GHz measurement facility.	Moved from the place in front of the text starting with “The Council administers Article 5

Registration-6	Article 15 -Registration of Measurement Facility accredited by Laboratory Accreditation Bodies 1)If a Member desires to register a measurement facility that has been approved by laboratory accreditation bodies specified in Item 2) of this article, the Member may apply for registration of the facility in the following way instead of the way described in Article 3. That is, the member prepares the required documents (Forms 201, 201G, 202A, and 202B) and submits them to the Council. (Note that valid accreditation is limited to the one performed in the country or region in which the accreditation body is registered.) Fees for examination of registration will not be charged because examination is exempted in this way of registration. If telecommunication ports measurement facilities and the radiated measurement facilities above 1GHz which also facilities site validation by site VSWR method are out of approved scope of the foreign institution, then the Member shall additionally register those out-of-scope facilities. Upon reception of an application for registration the Council verifies if the measurement facility in question is the one actually accredited by the accredited laboratory listed in Item 2) of this article. If the verification is affirmative the registration is established in that instant and the Council notifies the Member of registration number together with that fact. In this case certificate of registration will not be issued as in the case with item (3), Article 7.	Article 15 -Registration of Measurement Facility accredited by Laboratory Accreditation Bodies 1)If a Member desires to register an entirety of specific measurement location (as specified by the name or by its street address in the accreditation certificate) that has been approved by laboratory accreditation bodies specified in Item 2) of this article, the Member can do so in the following way instead of the way described in Article 3. That is, the member prepares the required documents (Forms 211) and submits them to the Council. (Note that valid accreditation is limited to the one performed in the country or region in which the accreditation body is registered.) Fees for examination of registration will not be charged because examination is exempted in this way of registration. ~~If telecommunication ports measurement facilities and the radiated measurement facilities above 1GHz (including site validation with VSWR method) are out of approved scope of the foreign institution, then the Member shall additionally register those out-of-scope facilities.~~ Upon reception of an application for registration the Council verifies the credential of the laboratory as accredited by the accreditation bodies listed in Item 2) of this article. If the verification is affirmative the registration is established in that instant and the Council notifies the Member of registration number. In this case certificate of registration will not be issued as in the case with item (3), Article 7.	To enable collective registration of measurement facilities of a single measurement location Editorial changes

Registration-7	In this way of registration examination fees stipulated in Article 13 will not be charged because examination is dispensed with. The application for renewal of the registration shall be handled in accordance with item 3 of Article 10.	In this way of registration examination fees stipulated in Article 13 will not be charged because the examination is dispensed with. The application for renewal of the registration shall be handled in accordance with item 3 of Article 10.	Missing English translation recovered

Record-1	**Normative Annex 2-2** **V-11/2011.04** Outline how to fill Registration Documents of Measurement Facilities Enacted : January 20, 1997 Amended: April 1,2011, 11th edition Applied from: April 1,2011	**Normative Annex 2-2** **V-11/2012.04** Outline how to fill Registration Documents of Measurement Facilities Enacted : January 20, 1997 Amended: April 1,2012, 12h edition Applied from: April 1,2012	

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Record-1	**1.1.3 New registration under Article 15 of V-5** (1) Form required for newly registering a facility for measuring radiated disturbance: Form 201 and the documents specified in item 4 of Form 201. (2) Form required for newly registering a facility for measuring conducted disturbance at Mains ports: Form 202A and the documents specified in item 4 of Form 202A. (3) Form required for newly registering a facility for measuring conducted disturbance at Telecommunication ports: Form 202B and the documents specified in item 5 of Form 202B. (4) Form required for newly registering a facility for measuring radiated disturbance above 1GHz: Form 201G and the documents specified in item 4 of Form 201G.	**1.1.3 New registration under Article 15 of V-5** (1)Form required for newly registering a facility for measuring radiated disturbance: Form 211 and the documents specified in item 4 of Form 211. Note: Required submission is a single sheet per location where situated are multiple accredited measurement facilities under the same accreditation number. Registration will be done collectively with a single registration number per location. (2)Form required for newly registering a facility for measuring conducted disturbance at Mains ports: Form 202A and the documents specified in item 4 of Form 202A. (3)Form required for newly registering a facility for measuring conducted disturbance at Telecommunication ports: Form 202B and the documents specified in item 5 of Form 202B. (4)Form required for newly registering a facility for measuring radiated disturbance above 1GHz: Form 201G and the documents specified in item 4 of Form 201G.	To enable collective registration of measurement facilities of a single measurement location

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Record-2	**1.2.3 Renewal of registration under Article 15 of V-5** (1) Forms required for renewing the registration of a facility for measuring radiated disturbance: Form 201 and the documents specified in item 4 of Form 201. (2) Forms required for renewing the registration of a facility for measuring conducted disturbance at Mains ports: Form 202A and the documents specified in item 4 of Form 202A. (3) Forms required for renewing the registration of a facility for measuring conducted disturbance at Telecommunication ports: Form 202B and the documents specified in item 5 of Form 202B. (4) Forms required for renewing the registration of a facility for measuring radiated disturbance above 1GHz: Form 201G and the documents specified in item 4 of Form 201G.	**1.2.3 Renewal of registration under Article 15 of V-5** (1) Forms required for renewing the registration of a facility for measuring radiated disturbance: Form 211 and the documents specified in item 4 of Form 211. Note: Required submission is a single sheet per location where situated are multiple measurement facilities accredited under the same accreditation number. Registration will be done collectively with a single registration number per location. (2) Forms required for renewing the registration of a facility for measuring conducted disturbance at Mains ports: Form 202A and the documents specified in item 4 of Form 202A. (3) Forms required for renewing the registration of a facility for measuring conducted disturbance at Telecommunication ports: Form 202B and the documents specified in item 5 of Form 202B. (4) Forms required for renewing the registration of a facility for measuring radiated disturbance above 1GHz: Form 201G and the documents specified in item 4 of Form 201G.	To enable collective registration of measurement facilities of a single measurement location

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Record-3	Forms required for registration 101G ○ 103G ○ ○ 104G ○ ○ 106G ○ ○ 107G ○ 111G ○ ○ 201G ○ ○		Before the revision

Record-3		Forms required for registration 101G ○ 103G ○ 104G ○ 106G ○ 107G 111G ○ 211 ○Note 1 ○Note 1	After the revision To enable collective registration of measurement facilities of a single measurement location

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Record-3	○: Forms required for registration R: Facility to measure radiated disturbance G: Facility t measure radiated disturbance above 1GHz C: Facility to measure conducted disturbance at Mains ports T: Facility to measure conducted disturbance at Telecommunication ports	○: Forms required for registration R: Facility to measure radiated disturbance G: Facility to measure radiated disturbance above 1GHz C: Facility to measure conducted disturbance at Mains ports T: Facility to measure conducted disturbance at Telecommunication ports Note 1: Submit a single sheet regardless of kinds and the number of measurement facilities involved	To enable collective registration of measurement facilities of a single measurement location

Record-8	**2.11 Forms 201, 201G, 202A, and 202B** (1) Item 1 (a): Enter the name of the company that has been registered with VCCI, and the member number that VCCI has assigned to the company. (2) Item 1 (b): Enter the name of the person responsible for the registration. The bill for the examination fee, and the certificate of registration, will be sent to that person. If you want these documents to be sent to any other person, provide the name and address of that person on an attached sheet. (3) Item 1 (c): Enter the name of a contact person, in case VCCI needs to ask any questions about the application. (4) Item 2 (a): If you have more than one measurement facility, enter the unique name of the facility you are applying to register. Example: (1) XXX Laboratory, site No. 1. (2) YYY Plant, site A.	**2.11 Forms 201, 201G, 202A, and 202B** (1) Item 1 (a): Enter the name of the company that has been registered with VCCI, and the member number that VCCI has assigned to the company. (2) Item 1 (b): Enter the name of the person responsible for the registration.. (3) Item 1 (c): Enter the name of a contact person, in case VCCI needs to ask any questions about the application. (4) Item 2 (a): Enter a unique name of the location (capacitated by a single accreditation scope) Example: (1) XXX Branch EMC Laboratory No.1 (2) EMC Center, YYY Plant	To enable collective registration of measurement facilities of a single measurement location + editorial changes

Record-8	**3. How to organize the application documents** If "n" facilities to be registered refer to a single common document, make "n" copies of the document and attach each to the individual facility application. Either that or unmistakably indicate what application carries the common document to be referenced. Include "information necessary to evaluate documents with" in attached data.	**3. How to organize the application documents** (for other than Article 15-effected applications) If "n" facilities to be registered refer to a single common document, make "n" copies of the document and attach each to the individual facility application. Either that or unmistakably indicate what application carries the common document to be referenced. Include "information necessary to evaluate documents with" in attached data. Refer to Form 100 for how to organize documents	Editorial changes

Record-8	**3.1 Collect application documents for each site in the order shown in the sample below, clip them together to keep them in order, and submit them to VCCI.** The following example is the document file required for the application for OATS. (1) Form 101 (2) Form 103 (3) Form 106A (4) Sketches (5) Drawing (physical illustration about the site)	**3.1** Application documents for measurement facilities should be filed in such a way that they are sorted by the kind of facility to be registered. Each application document should be preceded by table of content and marshaled in the order indicated in the example below. Bundles of papers should be clipped together so the order of papers is not disarrayed. A sample of table of content is available with Form 100A. The following example is a packae of application documents required for the registration of a semi-anechoic chamber for the measurement of radiated disturbance . (1) Form 101 (2) Form 104 (3) Form 106A (4) Sketches to be attached to Form 101 (5) Drawing (physical illustration about the site) to be attached to Form 101	Editorial changes with error correction

Record-9	(6) Photos: 1) Overall view of the measurement site 2) Metal ground plane clearly showing its construction 3) Turntable including a EUT desk. For a built-in turntable, photos showing electrical connection between the turntable circumferences and the metal ground plane. 4) Antenna mast including the stand, and tools to mount antenna (7) Forms 109A and 109B (also Forms 110A and 110B when you apply Appendix Ⅱ of Technical Requirements (V-3/2009.04) to your measurements), and 111 (8) Calibration data for the antenna used to measure the NSA (9) Data of cable loss of the coaxial cable: Shall include the type of the coaxial cable (example, 10D2W, Mark A), length of the cable, and date of the measurement *Title, Measurement Date, measurement person, and equipment name for measurement shall be written clearly in all of the measurement data.	(6) Photos to be attached to Form 101: 1) Overall view of a measurement site 2) Metal ground plane showing its construction 3) Turntable including a setup table. 4) Antenna mast showing its stand and antenna fittings structure (7) Forms 111, 109A and 109B (also Forms 110A and 110B when Appendix Ⅱ of Technical Requirements is applied) As to the frequency, fill out 35 kinds prescribed in Form 109A (no need for more than 35 kinds) (8) Calibration data for the transmit and receive antennas used for the measurement of NSA as attached to Form 101	Editorial changes for more detailed instruction

		(9) Data of cable loss of the coaxial cable as attached to Form 101 which comes with model name of the cable (e.g. RG-214, not to be confused with assembly name), cable length, date of measurement etc. For detail of data, refer to Form 101. (10) Block diagram of EMI system (clarify relationship with loss of coaxial cable) (11) Drawings and photographs attached to Form 104 (which clearly show electrical coupling structure between the periphery of the turntable and metal ground plane, if the turntable is a built-in type. (12) Data on frequency sweeping attached to Form 111 Make data into a graph and fill in the measurement frequency step condition.. This data should not be confused with that for Form 109B. Refer to Form 111 for detail.	

Proposed revision of VCCI Agreement to be implemented from April 2012

February 29, 2012 Revision WG