VCCI DAYORI

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Contents

Contribution

Reflections while looking back on my track

National Institute of Information and Communications Technology
Kaoru Gotoh

I stepped into the EMC field in 2003 when I entered the Communications Research Laboratory (currently, National Institute of Information and Communications Technology: NICT). Compared to the expert teachers and professionals in the field, I was mere a beginner standing at the entrance of the way. However, I am very honored to be given an opportunity to contribute to this issue of VCCI DAYORI. I would be glad if you can spare some minutes for this contribution.

The first task given by my boss Dr. Yukio Yamanaka (currently, Deputy Chief Examiner, Radio Wave Utilization Environment Committee, Information and Communications Council) was to measure the amplitude probability distribution (APD) of electromagnetic interference. I had specialized in signal processing at the university and had few experiences about RF measurement. In addition, I had a question at the time what research elements exist in the APD measurement because the concept of APD as a complementary cumulative distribution function is mathematically simple. Now I feel ashamed of my lack of understanding about the difficulty of EMC in those days.

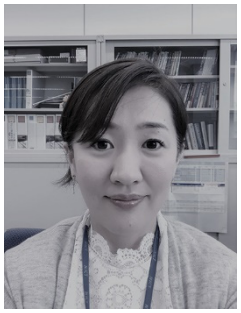
At that time, only a dedicating device (spectrum analyzer with additional equipment) or a research prototype containing a processing circuit in a small box could be used as APD measuring instruments. The behavior of the research prototype was unstable and inconsistent with updating the control system OS. I remember significant struggles to make the research prototype ready to use as a measuring instrument. Even after I got it to work as a measuring instrument, I experienced difficulties in measurements and struggled in many ways. How do I set measurement parameters? Why are expected results not obtained? Are the results correct? What's the meaning of the results? Why is the equipment so heavy? Of course, I also struggled with antennas, amplifiers, attenuators, level charts of the measurement system, and other things.

At the same time, APD measurements were being standardized by CISPR. In CISPR16-1-1 the equipment specifications were standardized as a measurement function of EMI receiver that can evaluate the degree of interference caused by electromagnetic interference on digital wireless communications. The measurement method in CISPR16-2-3 and the TR in CISPR16-3 was also continuously ongoing project. I intently drafted contribution documents with an English dictionary always close at hand, and found myself dealing with mysterious words, such as 1stCD, 2ndCD, and CDV, and with mysterious rules. However, I spent relatively peaceful days, staying in the realm of researchers as a so-called postdoctoral researcher.

Then came the time of standardization to adopt APD measurement for microwave ovens in CISPR 11. Since that time, I started attending CISPR meetings and domestic working groups. And becoming a permanent researcher at work made it difficult for me to hide in the shadow of my boss (Dr. Yasushi Matsumoto, currently

the chief of the CISPR H working group in Japan) and do only what I liked. I may have started thinking about my role around that time. In a discussion where the manufacturing industry, the interfering victim party and the testing laboratory are all seriously involved, how can I contribute from the neutral position of NICT with scientific knowledge? Then, the activities of the CISPR APD maintenance team and round-robin tests in APD measurements for microwave ovens brought me into contact with people from many countries. From this I learned how to think from various perspectives and how to proceed with discussions.

Currently, as a CISPR/H member, I am engaged with the generic standards IEC61000-6-3, IEC61000-6-4 and IEC61000-6-8 in addition to CISPR16-4-4 that handles model for electromagnetic interference limit setting. I have transitioned from a time when only the standardization of APD measurement was handled to a time when overall standards and their consistency and balance need to be considered. Also in the working place, I faces the melancholy of a middle management. As a whole, in retrospect, I always felt that it was the hardest at all stages, but I feel that I might actually have progressed slowly. Though the future prospects are not certain, what I can say for sure is, I have advanced forward and will be able to continue thanks to the support and cooperation of the VCCI Council and industries, and in closing, I sincerely appreciate all of them.



Kaoru Gotoh

2002 Ph.D. (engineering), University of Electro-Communications
2002 Lecturer, Sugadaira Space Radio Wave Observatory, University of Electro-Communications
2003 Researcher, Communications Research Laboratory (Currently: National Institute of Information and Communications Technology)
2008 Senior Researcher, National Institute of Information and Communications Technology
2016 Research Manager, National Institute of Information and Communications Technology

Committee Activities

● Board

Date	November 12, 2019
Reported items	● Reported item 1　FY 2019 first half business report

● Steering Committee

Date	November 20 and December 18, 2019, January 23, 2020
Decisions	● Agenda item 1　FY 2019 first half business report (draft) ● Agenda item 2　Guidance on radiated emissions measurements for EUTs that have radio functionality (draft) ● Agenda item 3　FY 2020 budgeting schedule (draft) ● Agenda item 4　Subcommittee activity plans for FY 2020 (draft) ● Agenda item 5　Term of committee members and schedule of steering committee for the next fiscal year (draft)
Reported items	● Reported item 1　Activities in the period from October to December were made by the dedicated subcommittees (Technical, International Relations, Market Sampling Test, Education, and Public Relations) ● Reported item 2　Secretariat work (member entry and withdrawal trends, the number of compliance verification reports, income and expenditure, etc.) ● Reported item 3　Report on VCCI seminars (Hokkaido Research Organization, Iwate Industrial Research Institute) and the fifth EMC technical seminar (Kyoto Prefectural Technology Center for Small and Medium Enterprises) (see page 21 and 24) ● Reported item 4　39th REDCA Meeting: Business Trip Report (see page 19) ● Reported item 5　Report on VCCI Korea Workshop 2019 (see page 22) ● Reported item 6　Report on 2020 Rules Briefing and Technical Symposium (see page 25)

● Technical Subcommittee

Date	November 13 and December 11, 2019, January 20, 2020
Agenda items	● Agenda item 1 Technical Subcommittee's activities for FY 2019 ● Agenda item 2 Technical Subcommittee's activities planned for FY 2020 ● Agenda item 3 2020 Rules Briefing and Technical Symposium ● Agenda item 4 VCCI 32-1-F:2020 “Guidance on Measurement of Equipment Under Test (EUT) with Radio Functionality - Considerations for Using a Preamplifier -” ● Agenda item 5 Considerations on challenges of EUT volume for radiated emission measurements above 1 GHz ● Agenda item 6 Spectral mask measurement for wired network ports as an alternative to conducted emission measurement ● Agenda item 7 Conducted emission measurements in time domain scan ● Agenda item 8 Considerations related to the calibration of the free space antenna factor ● Agenda item 9 Performing RRT with mains cable terminal conditions RRT measurement started in July 2019 and was conducted at 10 sites in six countries by January 2020
Continuing agenda items	● Agenda item 1 ● Agenda item 2 ● Agenda item 5 ● Agenda item 6 ● Agenda item 7 ● Agenda item 8 ● Agenda item 9
Decisions and reported items	● Agenda item 3 2020 Rules Briefing and Technical Symposium was held on January 10. ● Agenda item 4 VCCI 32-1-F:2020 “Guidance on Measurement of Equipment Under Test (EUT) with Radio Functionality - Considerations for Using a Preamplifier -” was issued on January 9. ● Reported item Report on 2020 Rules Briefing and Technical Symposium (see page 25)

● International Relations Subcommittee

Date	November 13 and December 11, 2019, January 8, 2020
Agenda items	● Agenda item 1 Survey on trends in world EMC standards ● Agenda item 2 FY 2019 overseas survey ● Agenda item 3 Preparation of international forum manuscript
Continuing agenda items	● Agenda item 1 ● Agenda item 2
Decisions and reported items	● Agenda item 2 FY 2019 first overseas survey in January 2020 visiting ACMA (Australian Communications and Media Authority) and New Zealand RSM (Radio Spectrum Management, Ministry of Business Innovation & Employment)

● Market Sampling Test Subcommittee

Date	November 14 and December 6, 2019, January 10, 2020
Agenda items	● Agenda item 1 Market sampling test ● Agenda item 2 Document inspection ● Agenda item 3 Survey on the display of the VCCI mark ● Agenda item 4 Collaboration with overseas institutions related to regulations ● Agenda item 5 FY 2020 business plan and budget ● Agenda item 6 Review of the classification code table
Continuing agenda items	● Agenda item 6 A review of the classification code table used for registration will be given to the Steering Committee for comments.
Decisions and reported items	● Agenda item 1 (a) Actions to be taken when there is no response from selected members were approved. ● Agenda item 1 (b) Publication of a failure (draft) on VCCI DAYORI No. 136 was approved. (see page 28) The item under survey was decided as passed based on a member's survey report. ● Agenda item 2 Nine documents were inspected and approved. ● Agenda item 3 Actions were approved for members whose display or registration was incorrect or incomplete. ● Agenda item 4 The FY 2019 visit to Taiwan institutions related to regulations was cancelled. Those concerns will be handled during the VCCI visit to Taiwan in June 2020. ● Agenda item 5 Approved

● Education Subcommittee

Date	November 7 and December 25, 2019, January 23, 2020
Agenda items	● Agenda item 1 Questionnaire results for the 40th "The basic technique of EMI measurement", the 51st and 52nd "The basic of electromagnetic waves, EMI measurement technique below 1 GHz", and the 16th "The EMI measurement technique above 1 GHz" ● Agenda item 2 Status of education and training conducted in FY 2019 ● Agenda item 3 Education and training plans for FY 2020
Continuing agenda items	● Agenda item 3
Decisions and reported items	● Agenda item 1 Questionnaire results for education and training conducted in FY 2019 All of questionnaire responses from attendees showed satisfaction or better results. ● Agenda item 2 Status of education and training conducted in FY 2019 ・The 51st "The basic of electromagnetic waves, EMI measurement technique below 1 GHz" was held on October 31 and November 1, 7, and 8, with 12 attendees, who received completion certificates. ・The 52nd "The basic of electromagnetic waves, EMI measurement technique below 1 GHz" course was held on October 31 and November 1, 14, and 15, with 13 attendees, who received completion certificates. ・The 16th "The EMI measurement technique above 1 GHz" course was held on December 5 and 6, with 11 attendees, who received completion certificates. ・The 6th "The level up of EMI measurement technique" course was held on January 23, 2020, with 12 attendees, who received attendance certificates. ・The 3rd "The EMI Measurement Instrumentation Uncertainty (MIU)" course was held on January 24, 2020, with 20 attendees, who received attendance certificates.

● Public Relations Subcommittee

Date	November 8 and December 6, 2019, January 10, 2020
Agenda items	● Agenda item 1 CEATEC 2019 exhibition report ● Agenda item 2 Preparation of Chinese version of the VCCI introductory video ● Agenda item 3 FY 2020 activity plan (draft) ● Agenda item 4 FY 2020 budget (draft) ● Agenda item 5 A VCCI introductory video to be presented at BicCamera in FY 2020 and later ● Agenda item 6 FY 2020 overseas exhibitions ● Agenda item 7 Novelties
Continuing agenda items	● Agenda items 4 and 7
Decisions and reported items	● Agenda item 1 Report on the CEATEC 2019 exhibition ● Agenda item 2 It was reported that VCCI introductory video (traditional characters) for Taiwan was completed and published on the VCCI website. The simplified character version for China will be completed and published at the end of January 2020. ● Agenda item 3 The committee approved the FY 2020 activity plan (draft). ● Agenda item 5 It was decided to produce an English version of the VCCI introductory video to be presented on the TV floor at BicCamera. Two patterns (1) voice: Japanese, subtitle: English and (2) voice: English, subtitle: Japanese will be alternately presented starting in April 2020. ● Agenda item 6 The committee approved an exhibition in the COMPUTEX TAIPEI 2020 (Taipei, Taiwan) in June 2020.

● Registration Committee for Measurement Facilities

Date	November 18, 2019
Agenda items	● Reviewed the results of deliberations by the Measurement Facility Examination WG.
Decisions	Conformity certified (including cases certified with qualification comments after checking of supplementary papers): 21 companies Radiated emission measurement facilities below 1 GHz 17 AC-mains-ports-conducted emission measurement facilities 8 Telecommunication-port-conducted emission measurement facilities 7 Radiated emission measurement facilities above 1 GHz 10 Applications returned with comments None Applications carried over to the next meeting None
Date	December 16, 2019
Agenda items	● Reviewed the results of deliberations by the Measurement Facility Examination WG.
Decisions	Conformity certified (including cases certified with qualification comments after checking of supplementary papers): 14 companies Radiated emission measurement facilities below 1 GHz 6 AC-mains-ports-conducted emission measurement facilities 8 Telecommunication-port-conducted emission measurement facilities 4 Radiated emission measurement facilities above 1 GHz 7 Applications returned with comments None Applications carried over to the next meeting None
Date	January 20, 2020
Agenda items	● Reviewed the results of deliberations by the Measurement Facility Examination WG.
Decisions	Conformity certified (including cases certified with qualification comments after checking of supplementary papers): 17 companies Radiated emission measurement facilities below 1 GHz 7 AC-mains-ports-conducted emission measurement facilities 12 Telecommunication-port-conducted emission measurement facilities 5 Radiated emission measurement facilities above 1 GHz 13 Applications returned with comments None Applications carried over to the next meeting None

●Report on Committee Activities: List of Acronyms

Abbreviation	Full Name
AAN	Asymmetric Artificial Network
AMN	Artificial Mains Network
ANSI	American National Standards Institute
APD	Amplitude Probability Distribution
APAC	Asia Pacific Accreditation Corporation
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China
BSMI	Bureau of Standards, Metrology and Inspection
CALTS	Calibration Test Site
CB	Certification Body
CB	Competent Body
CCC	China Compulsory Product Certification
CD	Committee Draft
CDN	Coupling Decoupling Network
CDNE	Coupling Decoupling Network for Emission
CDV	Committee Draft for Vote
CEMC	China Certification Center for Electromagnetic Compatibility
CEN	European Committee for Standardization
CENELEC	European Committee for Electro Technical Standardization
CISPR	International Special Committee on Radio Interference
CMAD	Common Mode Absorbing Device
CQC	China Quality Certification Center
CSA	Classical（Conventional）Site Attenuation
CSA	Canadian Standards Association
DAF	Dual Antenna Factor
DC	Document for Comment
DoC	Declaration of Conformity
DOW	Date of Withdrawal
DTI	Department of Trade and Industry
DUT	Device Under Test
Ecma	Ecma International
EICTA	European Information, Communications and Consumer Electronics Technology Industry Association
EMCC	Electro Magnetic Compatibility Conference
EMCAB	Electromagnetic Compatibility Advisory Bulletin
EMF	Electromagnetic Field
EMF	Electromotive Force
ETSI	European Telecommunication Standards Institute
EUANB	European Union Association of Notified Bodies
EUT	Equipment Under Test
FAR	Fully Anechoic Room
FDIS	Final Draft International Standard
GB	guo jia biao zhun（National Standard of China）

Abbreviation	Full Name
GSO	Gulf Cooperation Council Standardization Organization
ICES	Interference-Causing Equipment Standard
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IS	International Standard
ISM	Industrial Scientific and Medical
ITE	Information Technology Equipment
LCL	Longitudinal Conversion Loss
MIC	Ministry of Information and Communication
MME	Multimedia Equipment
MOU	Memorandum of Understanding
MP	Magnetic Probe
MRA	Mutual Recognition Agreement/Arrangement
NCB	National Certification Body
NICT	National Institute of Information and Communications Technology
NIST	National Institute of Standards and Technology
NP	New Work Item Proposal
NSA	Normalized Site Attenuation
OFDM	Orthogonal Frequency Division Multiplex
PAS	Publicly Available Specification
PLT	Power Line Telecommunication
R&TTE	Radio & Telecommunications Terminal Equipment
RBW	Resolution Band Width
REF	Reference
RRA	Radio Research Agency
RRT	Round Robin Test
RSM	Reference Site Method
RVC	Reverberation Chamber
SAC	Semi Anechoic Chamber
SDPPI	Semangat Disiplin Profesional Procuktif Integritas
S/N	Signal to Noise ratio
TF	Task Force
TG	Tracking Generator
UPS	Uninterruptible Power Supply
VBW	Video Band Width
VHF-LISN	Very High Frequency-Line Impedance Stabilization Network
VSWR	Voltage Standing Wave Ratio
WG	Working Group
WP	Working Party

20th instalment

Automotive EMC Standards Developed by CISPR and IEC/TC69

Masamitsu Tokuda

1. Foreword

Automotive emission standards are developed by SC-D of the International Special Committee on Radio Interference (CISPR) and automotive immunity standards are developed by TC22 (Road vehicles) of the International Organization for Standardization (ISO). In addition, EMC standards for electric vehicle chargers are developed by TC69 (Electric vehicles and electric industrial trucks) of the International Electrotechnical Commission (IEC).[1), 2)] This document introduces automotive EMC standards developed by CISPR and IEC/TC69.

2. Automotive emission standards developed by CISPR [1)]

Table 1 lists CISPR standards for automotive emissions. CISPR 12 stipulates measurements of radiated disturbance from vehicles to protect "OFF-BOARD RECEIVERS" such as those receiving radio and television broadcasts in nearby buildings. CISPR 12 has a long history. Its first edition was published in 1975, and then revised in response to the expansion of communication frequencies and upgrading of on-board electric/electronic devices. Edition 2 (1978), edition 3 (1990), edition 4 (1997), edition 5 (2001), and edition 6 (2007) were published sequentially. The latest edition (6.1) was published in March 2009. CISPR 12 covers electric vehicles (EV) and hybrid vehicles (HEV), as well as internal combustion vehicles.

Table 1 CISPR standards related to automotive emissions

Standard No. (Latest edition: publication date)	Title	Overview
CISPR 12 (Ed.6.1: 2009-03)	Vehicles, boats and internal combustion engines – Radio disturbance characteristics – Limits and methods of measurement for the protection of off-board receivers	Radiated disturbance measurement for protection of off-board receivers (Measurement frequency: 30 MHz to 1 GHz)
CISPR 25 (Ed.4.0: 2016-10 COR1: 2017)	Vehicles, boats and internal combustion engines – Radio disturbance characteristics – Limits and methods of measurement for the protection of on-board receivers	Radiated and conducted disturbance measurement for protection of on-board receivers (Measurement frequency: 150 kHz to 2.5 GHz)
CISPR 36 (Under deliberation: Ed.1.0: to be published in 2020)	Electric and hybrid road vehicles – Radio disturbance characteristics– Limits and methods of measurement for the protection of off-board receivers below 30 MHz	Radiated disturbance measurement for protection of off-board receivers (Measurement frequency: 150 kHz to 30 MHz)

While CISPR 12 is intended for the protection of receivers in buildings, CISPR 25 is intended to prevent electromagnetic noise of on-board electronic devices from entering respective on-board receivers (such as radio and television). With a background of activated commercial transactions between many component manufacturers and vehicle companies along with the progress in automotive electronics, deliberation of CISPR 25 was started by CIS/D in 1988 and the first edition was published in 1995. This standard is used by component manufacturers and vehicle companies as specifications for product development. For this reason, limit values specified in CISPR 25 are recommended values. Thus CISPR 25 stipulates both component tests and vehicle tests. Component manufacturers conduct component tests and verify that each test meets predetermined limit values, and then vehicle measurements are made. This is the general flow.

Measurement frequencies were expanded (up to 2500 MHz) and narrow band/broadband noise identification methods and limit values were reviewed in CISPR 25 edition 3 (2008). The following main changes were added in edition 4 (2016).

① Addition of measurement of electric vehicle charge modes

② Addition of measurement methods for high-voltage components for electric vehicles

③ Stipulation of verification methods for radio anechoic chambers for component measurement

Edition 4 was published in October 2016. After that, corrections in figures and frequencies were published as Corrigendum 1 in October 2017.

CISPR 36 is under deliberation in order to stipulate radiated disturbance below 30 MHz, which is not covered by CISPR 12. That CISPR stipulates conducted disturbance from the perspective that a reception failure is caused in a broadcast receiver due to conduction through a power line or communication line connected to the EUT and subsequent secondary radiation, rather than direct radiation from the EUT in a frequency range of up to 30 MHz. However, driven vehicles are not directly connected to an external power line or communication line and there was less radiated disturbance at 30 MHz or less in internal combustion vehicles. Therefore, CISPR 12 stipulates only radiated disturbance at 30 MHz or more. However, because battery-driven electric vehicles are likely to generate radiated disturbance below 30 MHz, CISPR 36 was required. However, CISPR 36 does not cover electric vehicles conforming to standard CISPR 14-1 (requirements for emissions of household appliances) and electric vehicles that run at a speed of 6 km/hour or less.

Initially, CIS/D/462/CDV of CISPR 36 was created based on the following policy. It was delivered in August 2019. However, the subsequent CIS/D/464/RV delivered in December 2019 was approved.

① Only vehicles including buses and trucks are to be measured. Unlike CISPR 12, boats are excluded.

② The minimum measurement frequency is 150 kHz.

③ Only the X and Y components of magnetic field are to be measured, excluding the Z component (vertical). Electric field is not stipulated.

④ Detection is to be performed with quasi-peak values.

⑤ Vehicle operating conditions include driving mode. Because charge mode is not included in the first edition, vehicle measurement in wireless charge mode will be an agenda item for edition 2 and later editions.

⑥ The measurement distance is 3 meters. A distance of 10 meters is not employed.

3. Automotive EMC standards developed by IEC/TC69 [1)]

The electric vehicle charger EMC is stipulated by the electric vehicle product standards in Table 2 created by IEC/TC69. IEC 61851-21 (2001) stipulates the requirements for vehicles during conductive charging. However, it was decided in 2011 that vehicle charging requirements would be standardized (ISO 17409) by IEC/TC69 and ISO and that this standard would be published as an EMC standard. Therefore, Part 21 was divided into two in TC69. Part 21-1 stipulates EMC of on-board chargers and Part 21-2 stipulates EMC of wired charging stations (off-board chargers).

IEC 61851-21-1 handles immunity tests and emission measurements of on-board AC and DC chargers. Because UN rule No. 10 edition 5 (R10-05) of automotive regulations stipulates charge mode tests for vehicles, IEC 61851-21-1 was standardized based on the consistency with that stipulation and then published in June 2017. FDFIS of IEC 61851-21-2 was approved in November 2017 and then published in April 2018.

IEC 61980-1 is the product standard for wireless power transfer (WPT) systems. Part 1 of IEC 61980-1 stipulates EMC requirements.

Table 2　EMC standards for electric vehicle chargers

Standard No. (Latest edition: publication date)	Title	Overview
IEC 61851-21-1 (Ed.1.0: 2017-06)	Electric vehicle conductive charging system – Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to AC/DC supply	Product standard related to on-board charger EMC
IEC 61851-21-2 (Ed.1.0: 2018-04)	Electric vehicle conductive charging system – Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply – EMC Requirements for off board electric vehicle charging systems	EMC standard for wired charging infrastructures related to AC/DC charging stations
IEC 61980-1 (Ed.1.0: 2015-07)	Electric vehicle wireless power transfer systems （WPT）– Part 1: General requirements	Product standard for wireless chargers

[References]

1) Hitoshi Tsukahara: Ⅵ. EMC standards and stipulations related to vehicles and chargers, special feature “World EMC standards and stipulations” (FY 2019 edition), Japan Management Association, p.38-48, 2019.4.

2) Masamitsu Tokuda: The history of ISO/TC22 (Road vehicles) and UN Regulation No. 10 (R10), VCCI DAYORI No. 123, pp.10-12, 2017.1.

Masamitsu Tokuda

1967	Graduated from Electronics Engineering Department of Hokkaido University
1969	Completed Electronics Engineering, Faculty of Engineering, Graduate School of Hokkaido University
	Joined NTT, assigned to the Electrical Communications Laboratories
1987	Leader of EMC Study Group, NTT Telecommunication Networks Laboratories
1996	Professor of Electric Engineering Department, Kyushu Institute of Technology
2001	Professor of Electronic Communication Department, Musashi Engineering University
2010	Professor emeritus of Tokyo City University
	Visiting co-researcher of the Graduate School of Frontier Sciences, The University of Tokyo

Major prizes received

1986	Merit award – IEICE (on the design theory and evaluation method for optical fiber cables)
1997	Information communication merit award by MPT (on EMC technology development)
2003	Industrial standard merit award by the minister of METI
2004	IEICE fellow
2007	Promoted to IEEE fellow

Report on VCCI International Forum 2019

International Relations Subcommittee

The VCCI Council provides members with information on the status of countries and regions where EMC regulations are undertaken or under consideration. To help members understand the latest information early, the VCCI Council holds an international forum every year. On October 18, 2019, VCCI International Forum 2019 was held as an adjoining conference with CEATEC in the same way as the last forum.

In this international forum, presentations on the trends of regulations in various countries and regions were conducted with invited lecturers from the European Union (EU), Cooperation Council for the Arab States of the Gulf (GCC), South Africa, and United Kingdom of Great Britain and Northern Ireland (UK).

[Countries/regions and presentation themes]

- EU: Updates on EU projects and harmonized standards for electrical equipment 2019
- GCC: GSO technical regulation for electrical products reconsidering EMC requirements
- South Africa: South Africa's revised standards and type approval framework
- UK: The impact of EU exit on the Electromagnetic Compatibility Directive in the UK

The presentations made full use of the scheduled time and provided useful information for the forum participants. After each presentation, a Q & A period enhanced interaction between guest speakers and forum participants. Guest speakers directly answered the questions from participants, enabling deeper understanding of information and tasks. Guest speakers and the program are shown below.

The VCCI's International Relations Subcommittees will continue to hold international forums. For the next forum they will select themes to meet the members' requests and encourage more participation. We would appreciate if members would inform the VCCI Secretariat of desired countries/regions and themes for presentations.

VCCI International Forum 2019 Program

Time	Minutes	Item
13:00 - 13:10	10 min	“Opening Speech” Mr. Keiichi Kawakami, VCCI President “VCCI Update” Mr. Akira Oda, VCCI Council
13:10 - 14:00	50 min	“Updates on EU projects and harmonized standards for electrical equipment 2019” Mr. Gwenole Cozigou Director, Industrial Transformation and Advanced Value Chains DG for Internal Market, Industry, Entrepreneurship and SME's European Commission
14:00 - 14:50	50 min	“GSO Technical Regulation for Electrical Products reconsidering EMC requirements” Eng. Basem Salameh Conformity Senior Specialist GCC Standardization Organization (GSO)
14:50 – 15:15	25 min	Coffee break
15:15 – 16:05	50 min	“South Africa’s Revised Standards and Type Approval Framework” Dr. Praneel Ruplal, Pr. Eng SMSAIEE Engineering & Technology
16:05 – 16:55	50 min	“The impact of EU Exit on the Electromagnetic Compatibility Directive in the UK” Ms. Antonia Jeans Senior Policy Adviser, Trade and Investment Negotiation (Manufacture Goods) Department for Business, Energy & Industrial Strategy (BEIS)
16:55 – 17:00	5 min	Appreciation to the guests and wrap up

The forum was a great success with 101 participants including Japanese members (mainly manufacturers and testing laboratories) and overseas members.

Overview of Q & A

The contents of questions and answers are provided to VCCI members for reference. The final decisions should be made at each company.

◆ About updates on EU projects and harmonized standards for electrical equipment 2019
(Speaker: Mr. Gwenole Cozigou)

Q1: When will the harmonized standard for composite radio equipment (such as multi-transmitter and multi-receiver) subject to the Radio Equipment Directive be published?

A1: The date of standard creation depends on the decision of the standardization body. The EU Commission wishes to provide a deadline, but is not sure the date of publication. Considering recent trends, the publication will be much later than expected by the EU Commission.

Q2: I understand that the EMC Directive is a regulation to prevent interference of a product with a distant receiver. Does the EMC Directive control interference within the same product?

A2: Such an interference problem has not been submitted to the EU Commission. If necessary, the EU Commission will consider this problem.

Q3: What is the relationship between the technical guide published by the Radio Equipment Directive Compliance Association (REDCA) and the harmonized standards of the RE Directive?

A3: Though we cooperate with the REDCA, the REDCA technical guide is not directly related to the harmonized standards. Only the RE Directive is a law. Though the guides published by the EU Commission do not have legally binding force, they are used for judgment. Harmonized standards are not laws, but are considered pseudo-laws.

Q4: The list of harmonized standards changed from C series to L series of the Official Journal (OJ). Has the format or content of the EU Declaration of Conformity (DoC) changed accordingly?

A4: The change from C series to L series does not affect the functions of the standardization system or other parts of the EU product laws. Therefore, there is no change in the DoC.

Q5: What is the “unofficial list” published on the website of the EU Commission?

A5: The unofficial list was made by integrating the published L series standard with the list dated July 13, 2018. This unofficial list has no legally binding force. Any errors in this list will be legally invalid.

Q6: The harmonized standard EN 55035 conforming to CISPR 35 is described in the L format in Annex 1 (publication list). Can this standard be used for compliance prediction? However, EN 55024 and EN 55103-2 are not described in Annex 2 (cancel list). In this case, is the compliance prediction according to the previous Official Journal (dated July 13, 2018) possible? Or is it necessary to immediately publish a new DoC according to EN 5503 after August 6, 2019 when the new OJ was delivered?

A6: Compliance prediction according to EN55035 is possible right now. Because EN 55024 and EN 55103-2 have not been cancelled yet, this standard can continuously be used for compliance prediction until the cancellation date for products that declared compliance according to this standard and were launched on the market. However, products that will be marketed after the cancellation date must conform to EN 55035.

◆ About South Africa's revised standards and type approval framework
(Speaker: Dr. Praneel Ruplal, Pr. Eng)

Q1: Is the Independent Communications Authority of South Africa (ICASA) monitoring the market?

A1: The ICASA checks whether a label indicating the frequency and specifications used in radio equipment is displayed. There are three or four monitoring points in each state and also mobile points. In addition, the ICASA monitors type approval and has a right to confiscate and destroy non-conforming equipment.

Q2: What are differences in regulations between radio equipment and household equipment?

A2: Registration to ICASA is required for radio equipment. While household equipment must register compliance with the emission and immunity standards to the South Africa Bureau of Standards (SABS).

◆ About the impact of EU exit on the Electromagnetic Compatibility Directive in the UK
(Speaker: Ms. Antonia Jeans)

Q1: What is the limited term for market launch with a CE mark after the UK's withdrawal from the EU without agreement?

A1: The term has not been determined yet. It will be determined after discussions with the industry. A sufficient term will be provided for the migration. Ultimately independent systems will be required for the UK and the EU. Therefore, the term will be limited. As with the U.S.A., Canada, and Australia, both the UKCA (UK Conformity Assessed) mark and CE mark are required.

Q2: Is there any problem if there is no authorized representative?

A2: No problem for a certain period. After the migration period, the importer can be the authorized representative.

Q3: Are the UK's EMC regulations the same as those of the EU?

A3: Yes, at this time. If there is any difference, the migration will proceed step by step. Details will be discussed with the industry.

Mr. Keiichi Kawakami, VCCI President

Mr. Akira Oda, VCCI Council

Mr. Gwenole Cozigou

Eng. Basem Salameh

Dr. Praneel Ruplal, Pr. Eng

Ms. Antonia Jeans

Appreciation to the guests and wrap up

39th REDCA Meeting: Business Trip Report

Steering Committee

Date and time: 9:00 to 17:00, Tuesday, November 5 / 9:00 to 12:00, Wednesday, November 6, 2019

Venue: Valetta Malta

Attendees: 120 from Europe, U.S.A., China, South Korea, Japan, and other locations (members and observers)
(including the EU Commission, ETSI, ECO, and NIST/USA)
Chairman: Mr. Pieter de Beer
Technical Secretariat: Mr. Nick Hooper

Participants on business: Yoshinori Watari, Chair of the Steering Committee (NEC Corporation)
Akira Oda, Executive Director (VCCI)

Reference: REDCA members (as of November 5, 2019)
Full members: 262 groups (among which 16 are Japanese groups)
New full members (approved in this meeting): 17 groups (among which 1 is Japanese group)
Observers: 9 groups (among which 2 are Japanese groups (one being the Ministry of Internal Affairs and Communications))

1. Introduction

The Radio Equipment Directive Compliance Association (REDCA) was formed based on the requirements of Radio Equipment Directive 2014/53/EU, and holds biannual general meetings for members on radio equipment compliance with EEA (European Economic Area) regulations and technical standards. These meetings also address compliance in countries that have signed mutual recognition agreements such as EU countries, the US, Canada, Japan, New Zealand, and Australia.

Materials distributed at meetings and details of proceedings are restricted to REDCA members, so this document only contains information disclosed to the general public.

2. Meeting overview

(1) Status of new members

Since the last meeting in Bulgaria, new full members (17 groups, among which 1 is Japanese group) have been reported on and approved.

(2) Agenda items regarding this meeting

① Deliberation of draft technical guidance notes (TGN)

② Sharing the latest information provided by the EU Commission

③ Sharing the latest market monitoring information provided by ADCO RED

④ The latest ETSI standards

⑤ Sharing the latest ECO information provided by Mr. Robin Donoghue

⑥ Sharing the latest CISPR information provided by Mr. Steve Hayes

⑦ Sharing the latest TCB Council/ISED information provided by Michael Derby

⑧ Introduction of MRA WORKSHOP 2020 from the Ministry of Internal Affairs and Communications, Japan

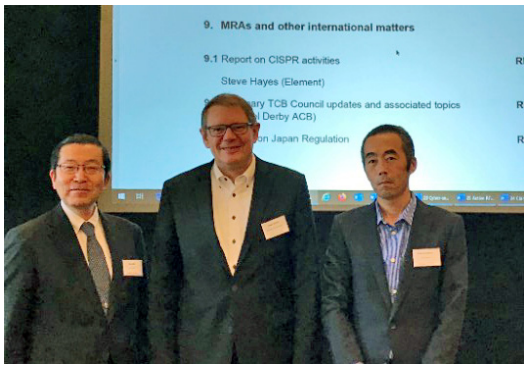
3. Next meeting

The next meeting is planned to be held in Estonia in May 2020.

<Impressions>

In this meeting, diverse agendas, including risk assessment, common chargers, and on-board equipment EMC, were deliberated. In particular, discussions on active antennas were quite heated. There was a question about the reason why active antennas need to comply with the RE Directive though they are not radio equipment. Furthermore, as the latest market monitoring information from ADCO RED, an issue was raised regarding how to deal with the case where products were compliant with the RE Directive when shipped but did not meet the requirements of the RE Directive due to installation of new software by the user.

Going forward, VCCI Council will continue participating in REDCA, strengthening its partnerships and deepening its friendships with relevant groups, while feeding back the latest information on the trends in European regulations and market monitoring status.



With the new chairperson

Meeting venue

Report on the VCCI Seminar at the Iwate Industrial Research Institute

Steering Committee

Host: Iwate Industrial Research Institute, a local incorporated administrative agency

1. Date and time: 13:30 to 16:30, Friday, November 15, 2019
2. Venue: Medium Hall, 3F, Iwate Industrial Research Institute
3. Audience: 26 (including members of the Iwate Industrial Research Institute)
4. Lecture (conducted by Masahiro Hoshino, VCCI Council Secretary General)
   (1) Introduction to VCCI Council's history and system, trends in EMC regulations in Japan and other countries
   Akira Oda, Executive Director (VCCI Council)
   (2) Content of the new technical standard (VCCI-CISPR 32: 2016)
   Takuya Nakamori, Chairman of Technical Subcommittee (Panasonic Corporation)
   (3) Market survey by VCCI
   Hiroaki Suzuki, Chairperson of Market Sampling Test Subcommittee (Casio Computer Co, Ltd.)
   (4) Overview and notes on registering VCCI facilities
   Seijun Fukaya, Secretariat of Measurement Facility Registration Committee (VCCI Council)
   * Questions and answers Hidenori Muramatsu, Technical Manager (VCCI Council)
5. Overview

In response to a request from the Iwate Industrial Research Institute for holding a VCCI seminar, we provided the four lectures shown above. Additionally, in response to questions, we provided explanations of changes from/additions to CISPR 22 and measurement instrumentation uncertainty.

Participants included those from companies in Iwate Prefecture and Tohoku district and also from Hakodate and Kobe. Colleagues from the organizer, the Iwate Industrial Research Institute, also listened attentively. The Iwate Industrial Research Institute is equipped with an EMC evaluation laboratory (a large-scale EMC test facility in the Tohoku district).

Since 2006, VCCI Council has been holding briefing sessions on VCCI Council's activities and technical seminars on EMC at industrial institutions in various regions. VCCI Council will continue to hold such events while incorporating requests from its attendees.

We are deeply grateful to Mr. Kamata, Director of the Iwate Industrial Research Institute, Mr. Endo, Mr. Abe, Mr. Oda, and Mr. Nomura, Electronics and Information Technology Division of the Iwate Industrial Research Institute, and persons involved for giving us the opportunity to hold this seminar.

Venue guide

Lectures

Report on the VCCI Workshop 2019 in Korea

Steering Committee

The following report provides an overview of the VCCI Workshop 2019 in Korea held on November 29, 2019.

The VCCI's new rules took effect in November 2016. The new and old rules operated in parallel, but since April 2019 only the new rules apply. As awareness raising activities for the new rules, overseas workshops have been held as a three-year project since 2017. Workshops were already held in the U.S.A., Taiwan, and China, and the last workshop was held in South Korea. There are 68 Korean member companies at present, ranking them fourth among overseas members, following the U.S.A., Taiwan, and China. These four countries U.S.A., Taiwan, China, and South Korea make up approx. 80% of overseas members. We greatly appreciate the full cooperation of the Korea Telecommunication Testing Laboratory Association (KOTT) in holding this workshop.

1. Date and time: 9:00 to 12:00, Friday, November 29, 2019
2. Venue: Pangyo Techno Valley Conference Hall (Bundang-gu, Seongnam, Gyeonggi-do, South Korea)
3. Attendees: Approximately 70
4. Purpose: To provide an overview of the VCCI's new rules based on CISPR 32 Ed.2.0 from each committee and subcommittee and to strengthen the relationships with Korean members
5. Lecture (conducted by Masahiro Hoshino, VCCI Council Secretary General)
   (1) Greeting and overview of VCCI Council — Akira Oda, Executive Director (VCCI Council)
   (2) Formulation of "Rules for Voluntary Control Measures" VCCI 32-1 (based on CISPR 32) and operation after the migration period — Yoshinori Watari, Chair of the Steering Committee (NEC Corporation)
   (3) Current rules of VCCI Council (content of technical standards)
   Takuya Nakamori, Chair of the Technical Subcommittee (Panasonic Corporation)
   (4) Overview of market survey (conformity assessments and market sampling tests)
   Hiroaki Suzuki, Chair of the Market Sampling Test Subcommittee (Casio Computer Co, Ltd.)
   (5) Overview and notes on registering facilities
   Seijun Fukaya, Secretariat of the Registration Committee for Measurement Facilities (VCCI Council)

<Overview>

At the beginning of this workshop, Akira Oda, Executive Director of VCCI Council expressed gratitude to the KOTTA members and participants. In lecture (1), activities and features of the VCCI Council and the contents of lectures were introduced. In lecture (2), the configuration and contents of the current rules for voluntary control measures were explained. In lecture (3), differences between international standards and national standards, the configuration of technical standards based on CISPR 32, interpretation of rules, and guidance were explained. After that, in lecture (4), market sampling tests, document inspections, and display investigation were introduced.

In lecture (5), an overview of facility registration was given and notes on application and related cases were explained.

In the Q & A time, there were questions about differences in Korean and Japanese laws/regulations. These included wireless functionality ON/OFF conditions for emission measurement, testing methods above 1 GHz (focused on antenna beam width), performing measurements with the maximum emission conditions, tests conforming to the Radio Law (conducted at the TELECOM Engineering Center: TELEC), and the relationship between tests conforming to the Electrical Appliance and Material Safety Law (conducted at the Japan Quality Assurance Organization: JQA) and voluntary regulation (VCCI). The features of Japanese systems and structures were explained again.

Outside view of venue building

Workshop venue 1

Workshop venue 2

Lecturers and KOTTA members

The VCCI Workshop in Korea was held five years after the workshop in 2014. We are deeply grateful to Mr. Young Kim, Chairperson, KOTTA members, and Ms. Yook Shim Ok, our interpreter, for their efforts in organizing this workshop.

Report on the 5th EMC Technical Seminar at the Kyoto Prefectural Technology Center for Small and Medium Enterprises

Steering Committee

Host: Kyoto Prefectural Technology Center for Small and Medium Enterprises

1. Date and time: 13:30 to 16:30, Wednesday, December 4, 2019
2. Venue: Training Room, 5F, Kyoto Prefectural Technology Center for Small and Medium Enterprises
3. Audience: 16 (including members of the Kyoto Prefectural Technology Center for Small and Medium Enterprises)
4. Lecture (conducted by Masahiro Hoshino, VCCI Council Secretary General)
   (1) Introduction to VCCI Council's history and system, trends in EMC regulations in Japan and other countries
   Akira Oda, Executive Director (VCCI Council)
   (2) Content of the new technical standard (VCCI-CISPR 32: 2016)
   Takuya Nakamori, Chair of the Technical Subcommittee (Panasonic Corporation)
   (3) Market survey by VCCI
   Hiroaki Suzuki, Chair of the Market Sampling Test Subcommittee (Casio Computer Co, Ltd.)
   (4) Overview and notes on registering VCCI facilities
   Seijun Fukaya, Secretariat of the Registration Committee for Measurement Facilities (VCCI Council)
   * Questions and answers Hidenori Muramatsu, Technical Manager (VCCI Council)
5. Overview

The Kyoto Prefectural Technology Center for Small and Medium Enterprises hosts EMC technical seminars several times a year. The lecturers shown above were requested for this seminar in advance. The 5th EMC technical seminar was held entitled “Electromagnetic disturbance standard for multimedia equipment.” In addition to these four lectures, Q & A time was also provided to answer the questions collected in advance. This seminar provided explanations about application scope including medical equipment (with information processing functions), key selection policies for market sampling tests, and how to point out improvements in document inspections.

Since 2006, VCCI Council has been holding briefing sessions on VCCI Council's activities and technical seminars on EMC at industrial institutions in various regions. VCCI Council will continue to hold such events while incorporating requests from its attendees. We are deeply grateful to Mr. Nakayama (senior researcher), Mr. Yoshida, and Mr. Nakagawa, Applied Technology Department of the Kyoto Prefectural Technology Center for Small and Medium Enterprises, and persons involved for giving us the opportunity to hold this seminar.

Lectures

Report on the 2020 Rules Briefing and Technical Symposium

Steering Committee / Technical Subcommittee

The 2020 rules briefing and technical symposium was held on Friday, January 10, 2020 at the Kikai Shinko Kaikan with about 130 member participants. The table below shows the program.

In a special lecture, Professor Toshihisa Shimizu, vice president of the Tokyo Metropolitan University, gave a lecture titled “Electromagnetic environment compatibility between electrical power equipment and can communication” In it he provided the analysis results of CAN communication system malfunctions due to common-mode noise current emitted from power electrical equipment. He also covered initiatives for communication failure suppression method.

In Part 1: rules briefing, the Steering Committee chairperson explained notes on handling equipment already registered under a regular product conformity verification in association with the termination of the operation standard migration period in March 2019. Furthermore, the secretariat of the Registration Committee for Measurement Facilities and the Technical Subcommittee chairperson explained the contents of the two guidance documents published in FY 2019.

In Part 2: technical symposium, the Technical Subcommittee chairperson provided a briefing on the FY 2019 activities of the Technical Subcommittee and working groups and gave an overview of papers presented at domestic and foreign academic conferences. This was followed by reports detailing the activities of the working groups.

■2020 Rules Briefing and Technical Symposium Program

Theme	Presenter
Greeting	Akira Oda Executive Director, VCCI Council
Steering Committee **Formulation of "Rules for Voluntary Control Measures" VCCI 32-1 (based on CISPR 32) and Operation after the Transition Period Expires** Explanation of notes on conformity verification registration after the transition period expires	Yoshinori Watari Chair, Steering Committee (NEC Corporation)
Registration Committee for Measurement Facilities **Overview and Notes on VCCI Facility Registration** Explanation of guidance for managing measurement facilities	Seijun Fukaya Secretariat, Registration Committee for Measurement Facilities
Technical Subcommittee **Guidance VCCI 32-1-F:2020 Guidance on Measurement of Equipment Under Test (EUT) with Radio Functionality** **- Considerations for Using a Preamplifier -** Explanation of guidance to be newly issued	Takuya Nakamori Chair, Technical Subcommittee (Panasonic Corporation)
Technical Subcommittee **Opening Considerations for the Technical Symposium** Explanation of FY 2019 activities of the Technical Subcommittee, CISPR deliberation trends, and overview of future activities	Takuya Nakamori Chair, Technical Subcommittee (Panasonic Corporation)

Theme	Presenter
Technical Subcommittee -- CISPR Project Working Group **in Deliberations on CISPR Standards and Endorsement Progress** Report on deliberation trends related to CISPR 16 and CISPR 32/35 standards, endorsement progress, and deliberation results of CISPR conferences SC-A, SC-H, and SC-I	Michiko Takahashi Convener, CISPR Project WG, Technical Subcommittee (Sony Global Manufacturing & Operations Corporation)
Technical Subcommittee -- VHF-LISN Working Group **Efforts toward CISPR Standardization for VHF-LISN and Report on Overview of the SC-A/I Joint Ad Hoc Group (JAHG6) RRT and Current Status** Report on CISPR/SC-A for VHF-LISN standardization, deliberations in the Shanghai Conference of SC-I Joint Ad Hoc Group (JAHG6), and overview of RRT performed in JAHG6	Kunihiro Osabe CISPR/SC-A/I JAHG6 Co-Convener Member, VHF-LISN WG, Technical Subcommittee (VCCI Council)
Technical Subcommittee -- Radiated Emission Working Group **Report on Verification of Measurement Distance and EUT Volume in Radiated Emission Measurement at Frequencies above 1 GHz** **(In Association with CISPR 16-2-3 Ed.4.1)** In CISPR 16-2-3 Edition 4.1, recommended maximum EUT volume diameters (based on measurement distance) were added for radiated emission measurement above 1 GHz. This report presents the verified results of comparison (performed for an EUT volume of φ5m) between measurement at the recommended distance of 10 m and a distance of 3 m, with horizontal scanning of the receive antenna.	Tsuyoshi Kobayashi Convener, Radiated Emission WG, Technical Subcommittee (Mitsubishi Electric Corporation)
Technical Committee -- Conducted Emission Working Group **Technical Report on Whether an FFT-Based Measuring Instrument Provides Different Measurement Results** An increasing number of test sites have begun to use FFT-based instruments which can reduce the measurement time of conducted emissions. However, only a few instances of comparison between the ordinary instruments and FFT-based instruments exist. This report presents the verified results of comparison performed between both types of instruments.	Motoki Yoshida Convener, Conducted Emission WG, Technical Subcommittee (Panasonic Corporation)
Technical Committee - Antenna Calibration and Site Validation Working Group **Calibration of Loop Antennas for Measurement of Radiated Emissions up to 30 MHz and NSA Verification of Measurement Facilities** Report on the deliberation status of CISPR 16-1-6 (CIS/A/1221/CD) and CISPR 16-1-4 (CIS/A/1250/CD) currently under revision	Katsunori Miura Convener, Antenna Calibration and Site Validation WG, Technical Subcommittee (Japan Quality Assurance Organization)
Special lecture **Electromagnetic Environment Compatibility between Electrical Power Equipment and CAN Communication** Report on analysis results of malfunctions of CAN system caused by common-mode noise current emitted from electrical power equipment and explanation of method for suppressing communication failures	Toshihisa Shimizu Vice-president, Professor Electronic Information System Engineering Department Faculty of System Design Tokyo Metropolitan University

Professor Toshihisa Shimizu (Vice President, Tokyo Metropolitan University) and presenters

Status on FY2019 Market Sampling Tests

Market Sampling Test Subcommittee

As of January 31, 2020

Planned number of market sampling tests	Loan-based	45	100
	Purchase-based	55	

Sampling test	Selected	Cancelled (Not shipped, etc.)	Owner's consent pending Inspectable samples	Testable samples	Test completed (Included number)	Judgment awaited	Judgment			
							Passed	Failed - tentative		
								Finally passed	Finally failed	Pending
Grand total	105	4	1	100	88	10	75	2	1	0
(Previous month grand total)	88	4	13	71	50	7	40	1	1	1

Loan-based testing total		50	4	1	45	40	4	34	1	1	0
Term (Included number)	1st Quarter	13	2	0	11	11	0	10	0	1	0
	2nd Quarter	12	2	0	10	10	0	9	1	0	0
	3rd Quarter	12	0	0	12	11	1	10	0	0	0
	4th Quarter	13	0	1	12	8	3	5	0	0	0

Purchase-based testing total		55	0	0	55	48	6	41	1	0	0
Term (Included number)	1st Quarter	20	0	0	20	20	0	19	1	0	0
	2nd Quarter	12	0	0	12	12	0	12	0	0	0
	3rd Quarter	7	0	0	7	6	1	5	0	0	0
	4th Quarter	16	0	0	16	10	5	5	0	0	0

Final Result

Passed	Failed	Pending
77	1	0

Document inspection	Selected	Cancelled (withdrawal, etc.)	Owner's consent pending Inspectable samples	Inspectable samples	Pre-check completed	Judgment awaited	Judgment completed	Judgment	
								Cleared	Problems identified
	40	0	0	40	38	4	34	28	6

* A case among the document inspections is a change from a loan-based test.

Details of failure in FY 2019

As of December 2019

Company	Sangikyo Corporation
Device: model	Optical wireless communication device: LED Backhaul 001
Test result	Radiated disturbance measurement: Vertical: 12.2dB excess at 654 MHz, horizontal: 19.6dB excess at 654 MHz Conducted disturbance measurement at telecommunication ports: 5.3dB excess at 0.415 MHz
Cause / improvement	**Cause:** ・Radiated disturbance In the process of folding capacitor leads after manual soldering, stress was applied to soldered parts, causing solder peeling at some soldered parts. ・Conducted disturbance at telecommunication ports The noise from power circuit entered the telecommunication port in the second lot due to the difference in RJ-45 connector mounting method between the first lot and the second lot. **Measures to take on stocked and shipped products:** ・For stocked products All devices are inspected as a measure against radiated disturbance. For defective devices, a capacitor is remounted. For non-defective devices, the soldered parts of the capacitor are fixed with silicon to prevent peeling. Furthermore, a filter is inserted into the DC power circuit of all stocked devices as a measure against conducted disturbance. ・For shipped products Shipped products are replaced for free with products having the countermeasures shown above. **Prevention:** Folding the leads of soldered components is prohibited in the manufacturing process. If the manufacturing process is changed, differences before and after the process change are to be checked with the image inspection equipment.

Report from the Secretariat

● List of Members (November 2019 - January 2020)

New members

Membership	Member No.	Company Name	Country
Regular	4051	Asuka Solution Company Limited	JAPAN
Supporting	4041	Gifu Prefectural Industry Technology Center	JAPAN
Regular	4001	Huaqin Telecom Tchnology Co., Ltd.	CHINA
Regular	4038	Fitogether, Inc.	KOREA
Regular	4040	AB Circle Limited	HONG KONG
Regular	4042	Amino Commuications Ltd	U.K.
Regular	4043	TCL OVERSEAS ELECTRONICS (HUIZHOU) CO., LTD.	CHINA
Regular	4044	Beijing Ulink Technology Co., Ltd.	CHINA
Regular	4045	Ufi Space Co., Ltd.	CHINESE TAIPEI
Regular	4046	Formlabs, Inc.	USA
Regular	4049	InVue Security Products, Inc.	USA
Supporting	4021	BUREAU VERITAS ADT (SHANGHAI) CORPORATION	CHINA
Supporting	4036	Bay Area Compliance Laboratories (Chengdu)	CHINA
Supporting	4037	SERTC Testing Center Corporation Limited	CHINESE TAIPEI
Supporting	4053	AA Electro Magnetic Test Laboratory Private Limited	INDIA

Company name change

Membership	Member No.	Company Name	Country	Old company name
Regular	371	Hitachi Solutions Technology, Ltd.	JAPAN	Hitachi USLI Systems Co., Ltd.
Regular	3237	ODS Corporation	JAPAN	ONKYO DIGITAL SOLUTIONS CORPORATION
Regular	3261	Canon Production Printing Netherlands B.V.	THE NETHERLANDS	Oce Technologies B.V.
Regular	3752	ST Engineering iDirect, Inc. dba iDirect	USA	VT iDirect, Inc.
Regular	3761	Turtle Beach Europe, Ltd.	CHINESE TAIPEI	ROCCAT Asia Pacific Co., Ltd.
Regular	3778	Nacon (HK) Ltd	HONG KONG	Bigben Interactive (HK) Ltd.
Regular	3996	Pensando Systems, Inc.	USA	PENSANDO SYSTEMS
Regular	4034	Prinker Korea Inc.	KOREA	SketchOn Inc.
Supporting	892	Hyundai C-Tech, Inc. dba HCT America, Inc.	USA	Universal Compliance. Labs dba EMCE Engineering

Note: Please fill out and submit "Form 9 Change Notification" on the website when a company name has been changed.

Withdrawal members

Membership	Member No.	Company Name	Country
Regular	2722	FURUNO ELECTRIC CO., LTD.	JAPAN
Regular	2922	FUTEC INC	JAPAN
Regular	3953	Zhejiang Libiao Robotics Co., Ltd.	CHINA

● VCCI Schedule for FY 2020

April ・Exhibition at TECHNO FRONTIER ・The basic technique of EMI measurement	**May** ・Info-communications promotion month VCCI seminar ・The basic of electromagnetic waves, EMI measurement technique below 1 GHz	**June** ・Exhibition at COMPUTEX TAIPEI ・The EMI measurement technique above 1 GHz ・Release VCCI Dayori No.137
July ・VCCI Business Reporting Meeting ・The EMI Measurement Instrumentation uncertainty ・Release Annual Report	**August**	**September** ・Release VCCI Dayori No.138
October ・Exhibition at CEATEC ・VCCI International Forum	**November**	**December** ・Release VCCI Dayori No.139
January ・VCCI Technical Symposium	**February**	**March** ・Release VCCI Dayori No.140

● Status of Compliance Test Notifications (VCCI 32-1)

(October 2019 ～ December 2019) (Product names are examples and are not limiting)

					October 2019			November 2019			December 2019		
			Class A	Class B	Class A	Class B	Total	Class A	Class B	Total	Class A	Class B	Total
Computer	Server	Super Computer, Server, etc.	A 2	a 2	15	0	15	30	1	31	16	1	17
	Tabletop type	WS, Desk-top PCs, etc.	B 2	b 2	2	8	10	0	12	12	1	20	21
	Portable type	Note PCs, Tablet PCs, etc.	C 2	c 2	0	45	45	0	31	31	0	46	46
	Others	Office Computer, Wearable computers, etc.	E 2	e 2	1	3	4	5	1	6	2	1	3
Peripherals/Terminals Equipment	Storage Device	HDD, SSD, USB Memory, Media drives, etc. Disk drives, NAS, DAS, SAN, etc.	G 2	g 2	11	23	34	9	16	25	4	36	40
	Printer	Printer (Compound equipment included), etc.	H 2	h 2	8	8	16	1	6	7	5	7	12
	Display	CRT displays, Monitor, projector, etc.	J 2	j 2	6	48	54	5	39	44	6	82	88
	Input/Output Device （excluding Auxiliary Memory, Printer, Display）	Image scanners, OCR, etc.	M 2	m 2	3	10	13	4	2	6	5	5	10
	General Purpose Terminal	Display control terminals, etc.	N 2	n 2	2	0	2	1	1	2	0	0	0
	Exclusive Terminal	POS, Terminal for Financial and Insurance use, etc.	Q 2	q 2	4	5	9	7	7	14	2	0	2
	Other Peripherals Equipment	Others (PCI cards, Graphics cards, Mouse, Keyboard, etc.)	R 2	r 2	8	43	51	4	55	59	9	33	42
Audio visual equipment	Broadcast receivers	Television, Radio, Tuner, Video recorder, Set-top Boxes, etc.	K 2	k 2	0	0	0	1	1	2	0	2	2
	Audio equipment	Speaker, Amplifier, IC recorder, MP3 player, Headsets, etc.	L 2	l 2	0	8	8	0	3	3	0	7	7
	Video/Camera equipment	Digital video cameras, Web cameras, Network cameras, Video players, Photo frames, Digital-camera, etc.	I 2	i 2	4	13	17	3	9	12	9	5	14
	Others	Other Audio visual equipment	P 2	p 2	3	2	5	2	2	4	4	4	8
Copying Machine/ Compound	-	Copying Machine/Compound equipment, etc.	S 2	s 2	2	2	4	1	1	2	4	0	4
Communications Equipment	Terminal equipment	Mobilephone, Smartphone, PHS telephones	T 2	t 2	0	8	8	0	6	6	0	4	4
		Telephone Equipment (PBX, FAX, Key Telephone System, etc.), Cordless telephones	U 2	u 2	0	0	0	1	0	1	0	1	1
	Network related equipment	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, TA, etc.)	V 2	v 2	3	3	6	1	2	3	1	3	4
		LAN Equipment (Rooter, HUB, etc.), Switching-node, etc.	W 2	w 2	49	13	62	36	14	50	42	26	68
	Others	Other Communications Equipment	X 2	x 2	7	9	16	11	14	25	20	5	25
Entertainment and educational equipment	Electronic stationeries	Electronic dictionaries, Electronic book readers, etc.	D 2	d 2	0	6	6	0	4	4	0	2	2
	Electronic toys	Game machines, Game pads, Toy drones, etc.	Y 2	y 2	0	4	4	0	0	0	0	3	3
	Lighting control equipment for entertainment	Lighting control equipment for entertainment	Z 2	z 2	0	0	0	0	0	0	0	0	0
	Others	Others (Navigator, etc.)	F2	f 2	0	2	2	0	0	0	0	0	0
Others			O 2	o 2	22	7	29	13	7	20	11	3	14
Total					150	270	420	135	234	369	141	296	437

● Registration Status of Measurement and Other Facilities

The following table indicates the status on registration of measuring facilities in the most recent three months.

Facilities listed here are only those made open by registering members in principle. Members with those facilities whose valid period expired are kindly advised to contact VCCI to inform of the status they are in. Status to choose from are, renewal application being filed, new application being filed, waiting for the next issue to carry, or terminating the registration (all facilities are posted in the Web site).

Facilities in Japan are listed in Japanese.

List of newly registered or renewed facilities (November 2019 – January 2020)

R: Radiated EMI measurement facilities below 1GHz　C: AC-mains-ports-conducted EMI measurement facilities

T: Telecommunication-port-conducted EMI measurement facilities　G: Radiated EMI measurement facilities above 1GHz

Company name	Equipment name	3 m	10 m	30 m	Dark 3m	Dark 10m	Registration number	Effective date	Location	Contact to:
Fujitsu Technology Solutions GmbH	FAR	-	-	-	-	-	G-20082	2022/11/17	Buergermeister-Ulrich-Strasse 100, 86199 Augsburg Germany	+49-821-8042502
地方独立行政法人北海道立総合研究機構工業試験場	寒冷地ものづくりラボ（MONOLABO）	-	-	-	-	-	G-20083	2022/11/17	札幌市北区北十九条西１１丁目	011-747-2947
地方独立行政法人北海道立総合研究機構工業試験場	寒冷地ものづくりラボ（MONOLABO）	-	-	-	○	-	R-20083	2022/11/17	札幌市北区北十九条西１１丁目	011-747-2947
地方独立行政法人北海道立総合研究機構工業試験場	寒冷地ものづくりラボ（MONOLABO）	-	-	-	-	-	C-20060	2022/11/17	札幌市北区北十九条西１１丁目	011-747-2947
地方独立行政法人北海道立総合研究機構工業試験場	寒冷地ものづくりラボ（MONOLABO）	-	-	-	-	-	T-20061	2022/11/17	札幌市北区北十九条西１１丁目	011-747-2947
Bureau Veritas Consumer Products Services(H.K.) Ltd., Taoyuan Branch	Chamber 6	-	-	-	○	-	R-20084	2022/11/17	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)	+886-3-264-1529
Wendell Industrial Co., Ltd.	Wendell EMC & RF Lab(W08)	-	-	-	○	-	R-20086	2022/11/17	No.119, Wugong 3rd Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C)	+886-2-917-5770
Wendell Industrial Co., Ltd.	Wendell EMC & RF Lab(W08)	-	-	-	-	-	G-20086	2022/12/15	No.119, Wugong 3rd Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C)	
Nemko S.p.A.	Nemko S.p.A.	-	-	-	-	○	R-20085	2022/11/17	Via del Carroccio, 4 Biassono (MB) Italy	+39-39-220-1201
Nemko S.p.A.	Nemko S.p.A.	-	-	-	-	-	T-20062	2022/11/17	Via del Carroccio, 4 Biassono (MB) Italy	+39-39-220-1201
Nemko S.p.A.	Nemko S.p.A.	-	-	-	-	-	G-20084	2022/11/17	Via del Carroccio, 4 Biassono (MB) Italy	+39-39-220-1201
Nemko S.p.A.	Nemko S.p.A.	-	-	-	-	-	C-20061	2022/11/17	Via del Carroccio, 4 Biassono (MB) Italy	+39-39-220-1201
HCT Co., Ltd.	HCT 10 m SAC #1	-	-	-	-	○	R-20087	2022/11/17	74, 578-gil, Seoicheon-ro, Majang-myeon, Icheon-si, Gyeonggi-do, KOREA	+82-31-645-6421

Company name	Equipment name	3 m	10 m	30 m	Dark 3m	Dark 10m	Registration number	Effective date	Location	Contact to:
CCIC Southern Testing Co., Ltd.	CCIC Southern Testing Co., Ltd.	-	-	-	-	-	T-20063	2022/11/17	Electronic Testing Building, No.43 Shahe Road,Xili Jiedao, Nanshan District, Shenzhen, Guangdong, China	+86-755-26703568
CCIC Southern Testing Co., Ltd.	CCIC Southern Testing Co., Ltd.	-	-	-	-	-	C-20062	2022/11/17	Electronic Testing Building, No.43 Shahe Road,Xili Jiedao, Nanshan District, Shenzhen, Guangdong, China	+86-755-26703568
CCIC Southern Testing Co., Ltd.	CCIC Southern Testing Co., Ltd.	-	-	-	-	-	G-20085	2022/12/15	Electronic Testing Building, No.43 Shahe Road,Xili Jiedao, Nanshan District, Shenzhen, Guangdong, China	+86-755-26620890
CCIC Southern Testing Co., Ltd.	CCIC Southern Testing Co., Ltd.	-	-	-	-	○	R-20089	2022/12/15	Electronic Testing Building, No.43 Shahe Road,Xili Jiedao, Nanshan District, Shenzhen, Guangdong, China	+86-755-26626906
Audix Technology Corporation	Audix Technology Corporation No.8 Shielded room	-	-	-	-	-	T-20064	2022/12/15	No 53-11, Dingfu, Linkou Dist., New Taipei City, Taiwan, R.O.C.	+886-2-2609-2133
BUREAU VERITAS ADT (SHANGHAI) CORPORATION	No.1 Shielded Room	-	-	-	-	-	C-20063	2022/12/15	Building C, No. 829, Xinzhuan Road, Song Jiang District, Shanghai, China	+86-21-37602600-2715
BUREAU VERITAS ADT (SHANGHAI) CORPORATION	No.1 3m Semi-anechoic chamber	-	-	-	○	-	R-20090	2022/12/15	Building C, No. 829, Xinzhuan Road, Song Jiang District, Shanghai, China	+86-21-37602600-2715
BUREAU VERITAS ADT (SHANGHAI) CORPORATION	No.1 3m Semi-anechoic chamber	-	-	-	-	-	G-20087	2022/12/15	Building C, No. 829, Xinzhuan Road, Song Jiang District, Shanghai, China	+86-21-37602600-2715
BUREAU VERITAS ADT (SHANGHAI) CORPORATION	No.1 Shielded Room	-	-	-	-	-	T-20065	2023/1/19	Building C, No. 829, Xinzhuan Road, Song Jiang District, Shanghai, China	+86-21-37602600-2715
TUV SUD Canada (Ottawa)	TUV SUD Canada (Ottawa)	-	-	-	○	○	R-20088	2023/1/19	1280 Teron Rd. Ottawa, Ontario, Canada K2K2C1	+1-613-668-5149
Guangdong Keyway Testing Technology Co., Ltd.	Guangdong Keyway Testing Technology Co., Ltd.	-	-	-	-	-	C-20064	2023/1/19	No.7 of Zhangmutou District, Guanzhang Road, Zhangmutou town, Dongguan Guangdong China	+86-769-87182258

Company name	Equipment name	3 m	10 m	30 m	Dark 3m	Dark 10m	Registration number	Effective date	Location	Contact to:
BV CPS ADT Korea Ltd.	10 m SAC	-	-	-	-	-	G-20089	2023/1/19	49, Heungan-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea	+82-10-7747-8994
BV CPS ADT Korea Ltd.	Shield Room 1	-	-	-	-	-	C-20065	2023/1/19	49, Heungan-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea	+82-10-7747-8994
BV CPS ADT Korea Ltd.	Shield Room 1	-	-	-	-	-	T-20066	2023/1/19	49, Heungan-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea	+82-10-7747-8994
BV CPS ADT Korea Ltd.	3 m SAC	-	-	-	-	-	G-20088	2023/1/19	49, Heungan-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea	+82-10-7747-8994
岐阜県産業技術総合センター	電波暗室	-	-	-	○	-	R-20094	2023/1/19	岐阜県関市小瀬 1288	057-529-0147
岐阜県産業技術総合センター	シールドルーム	-	-	-	-	-	C-20066	2023/1/19	岐阜県関市小瀬 1288	057-529-0147
岐阜県産業技術総合センター	電波暗室	-	-	-	-	-	G-20090	2023/1/19	岐阜県関市小瀬 1288	057-529-0147
Nemko AS	LYSAKER Laboratory, SAC3	-	-	-	-	-	G-20091	2023/1/19	Philip Pedersens vei 11 1366 Lysaker Norway	+47-41569511

Closing words

Pork cutlet

I confess to being an unrivaled pork cutlet lover.

I used to go popular chain pork cutlet restaurants sometimes. However, about five years ago, my wife said to me “I heard a rumor that there is a restaurant that serves delicious pork cutlet. Let’s go there!” We tasted the very fine pork cutlet at the small restaurant, and since then I have been addicted to it.

I was surprised at the price of 2,500 yen, which is about twice of that of the chain restaurants. We waited for 30 minutes after ordering. I felt frustrated how long I had to wait, but I calmed down after I found a poster on the wall saying, “Cooking takes time. If you are in a hurry, please leave!”

We waited patiently for 45 minutes. Finally, the pork cutlet was served. The batter around the pork looked very crispy. The meal included cabbage, fried vegetables, and miso soup with pork and vegetables. It was also garnished with pickles, dedicated special sauce, special blended salt, ground sesame, and mustard.

When I put the special blended salt on the fat at the end of a piece of pork cutlet and ate it, it melted and sweet taste spread in my mouth. (Impressed! (≧◇≦))

Since that day, visiting this restaurant with my wife every weekend has become a habit.

After a while, I understood that the restaurant pays a great deal of attention to the cooking methods. Pork is carefully prepared by cutting away the pork gristle, and then it is slowly fried with relatively low-temperature lard. Furthermore, the restaurant orders branded pork from all over the country and serves “limited roast cutlet.” Needless to say, this roast cutlet is more expensive, but it is also exquisite!

In Japan, the following typical kinds of branded pork are available (but these form only a small part).

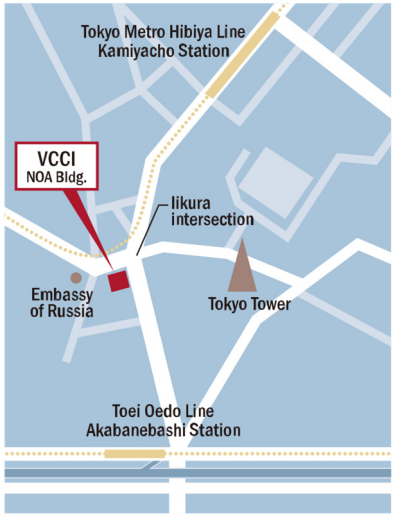
- Nakijin Agu pork: As you may know, this is a rare pork from Okinawa. These pigs are allowed to run free, grazing and exposed to salty breeze and rain. Also, they are allowed to bath in mud wallows. They are mainly fed with Okinawan corn.
- Platinum pork: These pigs are fed with only forage produced in Iwate and drink natural Iwate groundwater filtered through mineral-rich ore mined in Kamaishi.
- Kurao pork: These pigs are fed with forage mixed with pieces of baumkuchen produced in Shiga.

The passion of the pork farmers is conveyed by these tasty branded pork products featuring regional characteristics and uniqueness.

Because such branded pork is subject to being sold out, I reserve it every week.

This is why I am longing for every weekend. However, these days I am worried about classical swine fever (CSF), a disease of pigs and wild boars. If there is an occurrence of this disease, all pigs within a radius of 3 km from the source piggery will be killed according to the policy of the Ministry of Agriculture, Forestry and Fisheries of Japan. This disease often drives pig farmers out of business. Recently, a CSF infection has spread from Gifu Prefecture to the Aichi, Mie, and Kanto regions. In addition, an infection in Okinawa was reported early in 2020. Agu pigs are on the verge of extinction. In the future, branded pigs may become extinct and we may be able to eat only tasteless pork raised in closed sterile rooms.

Let’s enjoy local branded pork before it is too late! (J.I.)



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