VCCI DAYORI

No.127　2018.1

Contents

New Year Greetings

President of VCCI Council

Keiichi Kawakami

A Happy new year!

In the CEATEC JAPAN 2017 held in October last year, reputed as one of the grandest CPS/IoT exhibition in the world, efforts across industries were demonstrated toward the realization of “Society 5.0” covering AI, Big Data and other innovative concepts which may change our society. In “Society 5.0” synonymous with “Super smart society” is defined as follows. “It will be a society in which necessary things and services of high quality are proved to any people in need of them when they are needed. In such a society people can live lively and happy lives by overcoming the differences in age, sex, place they live in and language they use among others. The electronic industry deeply associated with VCCI is expected to play key roles in contributing to the realization of such “Society 5.0” by way of creating necessary platforms for it. They will in turn help solve various problems in the world.

VCCI has been acting for as long as 30 years to protect the interest of consumers in Japan by way of keeping their electronic and electric appliances from disturbances emitted by nearby ITEs. VCCI technical requirements underpinning this activity are in conformance with the international standard CISPR as widely and well recognized in Japan. We thankfully recognize that we owe this fact to cooperative support of related government offices and of VCCI members.

In March 2015 CISPR 32 Ed. 2 was released for the emission control of multimedia equipment. This edition was endorsed for Japan by the MEC Information and Communication Council in December 2015. This multimedia EMC standard consolidates requirements for Information Technology Equipment and Audio Visual Equipment in a single standard instead of previous two parallel standards. By following this move VCCI established a new set of VCCI requirements in November 2016 and started its application. We assume that VCCI members are smoothly coping with the new VCCI rules.

The VCCI’s rule based on autonomous control of emissions by members was established based on the following scheme from the beginning. They are conformity verification by members themselves, fair market sampling tests by VCCI and registration of members’ measuring facilities to VCCI. On top of those activities VCCI conducts educational seminars in local industry technology centers in Japan and periodically convenes meetings with related overseas industry associations and accreditation bodies for the purpose of information exchanges. Last year VCCI conducted VCCI International Forum as one of the associated events of CEATEC JAPAN 2017 in which VCCI ran its own booth. Also VCCI ran educational and enlightening seminars in local technology industry centers in addition to periodical international information exchange meetings with overseas industry associations and accreditation machineries for the cooperative purposes. Last year VCCI ran its own booth in CEATEC JAPAN 2017 and conducted VCCI International Forum as an associated conference there. Also

VCCI ran workshops in the US, Chinese Taipei and locally in Japan to promote the understanding of people on the new VCCI rules.

It is our commitment to contribute to the maintenance of cleaner radio environment in Japan with the cooperation of you VCCI members while we will make our best efforts to tune ourselves to technical innovations such as CPS/IoT in order to better pursue our missions.

We hope Year 2018 will be the year of great strides for us all.

Contribution

Living in a country side

Koji Komiyama

One year has passed since I started living in Toyama. It seems people are envious talking about a life in a country side, but I had to move to a country side without any preparations and expectations. Here I like to tell you about my personal experience on my life in Toyama.

Undergoing an examination

This topic has little to do with the subject, but it is a byproduct of a life in a country side. I took an examination for the first grade amateur radio operator this April. To tell the truth I started get interested in amateur radio operations while I was a high school student of the city of Gifu. This city belonged to Area 2 with call sign JA2 which turned out to be almost fully allocated, so I hurried to take an examination of the easiest telephone level class operator and passed for running a radio station, but station ID I got was JH3U something (if my memory serves) which was also almost fully assigned as the Kansai area was more densely populated than the Chubu areas. It was in 1970. The frequency allocated was short wave HF and 144MHz HF needed a long antenna and 10W power was almost useless, so for the most of time I moved around the Kyoto Basin with 144MHz. Meanwhile I took upper grade license test for 100W power station by adding a vacuum tube to the transmitter's final stage, but I failed the test because the hands - on test on real Morse signal transmit/receive skills was difficult. I had already modified the transmitter by assuming I would pass the test. So there was no choice but abandoning my amateur radio operation. I justified this decision inside myself as I had reengineered my machine which could not be undone and was moved by the words of the professor when I was assigned to a laboratory of my university "I quit being amateur as I became professional".

Last year I move to Toyama by having quitted a work obtained in rehire for a reason. There I happed to find an article in the Internet that says that lisence test for amateur radio operation no longer includes actual operation test. I confirmed this news this way and that and knew it was true. It was certainly abolished several years ago. I thought that I might pass the test this time, the upper most license – I made up my mind anyhow over my past memory. First I thought that I may pass the test this time without much preparations as my current job is still in the field of radio communications. On the second thought I should prepare for the test somehow because the failure is not acceptable as the fee for the test is not a small amount. I determined to tackle little by little with drills of 10-years or older problems. I did not have many difficulties with radio wave related questions as it is my field of job, but I failed questions of four fundamental mathematical calculations somewhere repeatedly, by which I was reminded of my deep senility. This and that ways I struggled to somehow practice past math questions in almost half a year. Even in the previous night of the test day I did calculation practices. On top of radio engineering there were tests on radio regulations which gave me much more headaches as they lacks logic unlike engineering rules.

While I was busy with this and that I took out a 47 years old radio receiver long planned for selling out in auction and tried to operate it. I is capable of receiving recent digital communications in the short wave band. Signals decoded by a PC realized the reception of radios from South African and European countries without problems. Those new and old nostalgic experiences made me enjoy a feeling Taro Urashima could have enjoyed in the seashore where he returned to.

Living in the country

Now back to the story of main theme – country side. I once lived in the Tsukuba Academic City, created by clearing waste land. While the city is a country side, if flatly described, it was developed in accordance with the city planning created in the era of the hyper growth era. Roads are layouted with geometrical plan which may look beautiful down from airplanes, but a problem was when you drive a car in the area you do not know which way you are heading for. When we moved to Tsukuba area there almost was neither super market nor individual small retailer there, so we had to go shopping to nearby towns. Tsukuba city in those days was more of wild field rather than country side. The international exposition held there gathered supermarkets and department stores, but later economic bubble bursting and long waited railway directly connect the city to Tokyo wiped out department stores and almost all conveniences there. We experienced a rise and fall of a city in a short period of time there.

Today I live in the Toyama prefecture which can be referred to as a country of country. We are overwhelmed by the Tateyama mountain range with its great height. Bridges over the river are designed to have its center get elevated highest so when you cross the bridge with a car you will be surprised with the sudden appearance of the mountain in front of you.

Some people working in Tsukuba stay in the city after retirement while some people get back to their hometowns. These days living in a country side makes a subject of TV. Also city and towns are promoting “back to the hometown” campaigns. In almost all prefectures in Japan these days the urbanization is more or less progressed especially in the town where the administration offices are located. So in order to enjoy country side life you may think it will be good to live in the place with a distance from the city administration offices. But the reality is that you will be suffered by inconvenience in doing so. Take the case of change of the license plate of your car to the local one for instance. You may encounter the problems such that administration office is not located in other than the prefectural seat. This problem is generally the same with city banks. Recommendable for people wanting live in a country side is “live in places near the prefectural administration offices.”

Side information – there was no branch office of any of the three Japanese city banks in the Toyama prefecture.

To live in Tonami

What is the city of Tonami famous for? “Turips” will be a common answer. Certainly turips are a resource of farming as implied by the existence of the “Turip Park.” In its season a festival named “Turip Fair” attracts many people. A critical view is that the “Turip” do not bloom all year around and that park is overcrowded with visitors in the season. It is assumed that town Tomami was naturally born from animals passages. You will notice that there are no straight paths there and the route is easy for people to get lost. For the car it is impossible to get the destination without car navigation system.

To live in a temple in the country side

I, though not a priest, live in a temple in Tonami. Other people are all priest. I observe lives of priest there. I practice whatever priests practice including the visit to the homes of the owners of graves for the religious services. Although the temple is not large, things we are usually given at the owners' home we visited for religious services are abundant (most of them are sweets) .So we give most of them away to many visiting guests who come to the temple and chat about this and that like in a community hall.

This temple does not have practice of selling religion related goods unlike any other temples which makes me a bit forlorn. It is said that Buddha talked about many good things, but depending on the situation for such talks different interpretation was made which led to the establishment of many different sects.

Advantage for me in living in a country side is that I can freely use a wide space to build a long wireless communication antenna for amateur radio operation. This situational advantage prompted me to take an examination for amateur radio operation again.

Koji Komiyama

1980 – Pre-AIST laboratory

2000 – 2016 AIST (Agency of Industrial Science and Technology)

2000 – 2017 Member of VCCI Measurement Facility Registration Committee

Today A member of the VLAC Accreditation Committee

Committee Activities

● Board of Directors

Date	October 23, 2017
Report given	● Business results for the first half of the FY2017

● Steering Committee

Dates	September 20 and October 18, 2017
Agenda items	● 1. The contents of the report of No.32 Board of directors ● 2. New VCCI members admitted in July - September
Decisions made or report given	● Agenda item 1. Approved ● Agenda item 2. Approved ● Reporting item 1. Activity report for the months of July through September by subcommittees (Technical Subcommittee, International Relations Subcommittee, Market Sampling Test Subcommittee, Communication Subcommittee and Education Subcommittee) ● Reporting item 2. Administrative matters (on membership fees and expenditure by project) for the period of July – September ● Reporting item 3. Budgetary status (membership fees income and project expenditures) ● Reporting item 4. Reports on Participation in IEEE EMC International Symposium in Washington DC ● Reporting item 5. Business trip to EMC Europe 2017 (Angers France)

● Technical Subcommittee

Date	September 22, 2017
Agenda items	● 1. Activities in FY2016 of Technical Subcommittee and WGs under it ● 2. Reviewed a document on the maintenance of CISPR 32 Ed.2.0 ● 3. Study of the influence of radio communication feature to the measurement of radiated emissions from EUT ● 4. Impact to measurement results of conducted emissions by radio communication devices using the same frequency ranges for the measurement ● 5. Study of calibration method for antenna factors in free space ● 6. Proposal on VHF-LISN to CISPR standardization
Pending business	● Agenda items 2 through 6
Decisions made or report given	● Report given: A VCCI paper accepted for EMC Europe held in Angers France in September together with related papers of other participants

● International Relations Subcommittee

Dates	September 1 and 25, 2017
Agenda items	● Agenda item 1. Study of the direction in EMC standards in the world ● Agenda item 2. Preparation for the 2017 EMC International Forum and translation of presentation materials
Pending business	● Agenda item 1.
Decisions made or report given	● Convened a VCCI international Forum by inviting speakers from EU commission, GSO and BSMI. After that posted the session materials in "The study of EMC regulations in the world" section of the page for the VCCI members of the VCCI site.

● Market Sampling Test Subcommittee

Dates	September 8 and October 13, 2017
Agenda items	● 1. Document inspections ● 2. Treatment of samples judged "Fail level" ● 3. Special treatment in the market sampling test ● 4. Report on actions taken on findings in the VCCI mark indication survey ● 5. Market Sampling Test based on VCCI-CISPR 32 rules
Pending business	● Agenda item 2. Five cases were identified as "failed tentative." Four of them are on the hands of owners for their investigations. The remaining one is to be judged officially. ● Agenda item 5. Detailed method of marketing sampling test has not been determined yet. This subcommittee will start a study on concrete testing procedures by referencing related texts used in education and training undertakings. Also will study testing items covering FAR in a way the commissioned testing organizations can follow.
Decisions made or report given	● Agenda item 1. Conducted 15 cases of document inspections. Pointed out problems with the operation mode and testing conditions etc. All were cleared by proper responses except one case judged needing additional testing under different power supply conditions. ● Agenda item 3. A loaned testing was not possible due to a problem of license on the loan of special auxiliary equipment. Therefore, the testing team admitted testing overseas by the member. Reviewed the provided test report and judged "passed." ● Agenda item 4. Found several non VCCI members selling their product with the VCCI mark leveled. Invited them to join VCCI. One of them accepted the invitation.

● Education Subcommittee

Dates	September 6 and October 11, 2017
Agenda items	● 1: Revisit to texts for training courses opened in FY2017 ● 2: Policy on the texts development for FY2018 courses ● 3: Results of questionnaire on "The basic course" for the 36th Measurement engineer training course ● 4: Revisit to loanable equipment for educational purposes
Pending business	● Agenda item 1. Continue revisiting the text for the VCCI rule based on CISPR 32 to be used in a course in FY 2017 ● Agenda item 2. Continue revisiting the texts for the courses "Uncertainty in EMI measurement" and "Measurement of radiated emission above 1GHz" to be started in FY2018 ● Agenda item 4.
Decisions made or report given	● Completed the revisit to the text for "The training session for engineers engaged in the measurement below 1GHz "to be actually used in a session started from October 19. Text for the course "Application of automatic and manual measurement" will be completed in November. ● Continue the editing of the texts on "Uncertainty in EMI measurement," and "Measurement of radiated emission above 1GHz" as policy on the lecture and items to cover and responsible persons for the text development were determined. ● Education and training endeavor in 2017 • 24 trainees enrolled in "the 36th Basic course for measurement engineers held on September 15. • Questionnaire on the satisfaction level resulted in positive.

● Communication Subcommittee

Dates	September 8 and October 13, 2017
Agenda items	● 1. Renewal of the VCCI movie ● 2. 2018 Calendar ● 3. Participation in CEATEC 2017 ● 4. Illuminated ad-board in JR Osaka station
Pending business	● Agenda item 1 ● Agenda item 4
Decisions made or report given	● Agenda item 2. Completed was the print of 2018 calendar with the table of EMC standards. Will distribute this calendar in various events including exhibitions ● Agenda item 3. A report was given on the VCCI participation in CEATEC held from October 3 to 6.

● Measurement Facility Registration Committee

Date	September 11, 2017
Agenda items	● Reviewed the result of deliberations by the Measurement Facility Examination WG and concluded as follows
Decisions made and items completed	Conformity certified (including cases certified with qualification comments after checking of supplementary papers); 24 companies • Radiated EMI measuring facilities; 14 • Mains ports conducted EMI measuring facilities; 17 • Telecommunication ports conducted EMI measuring facilities; 10 • Radiated EMI measurement facilities above 1GHz: 10 Applications returned with comments; none Applications carried over to the next meeting; none
Date	October 16, 2017
Agenda items	● Reviewed the result of deliberations by the Measurement Facility Examination WG and concluded as follows
Decisions made and items completed	Conformity certified (including cases certified with qualification comments after extra paper checking); 27 companies • Radiated EMI measuring facilities; 10 • Mains ports conducted EMI measuring facilities; 7 • Telecommunication ports conducted EMI measuring facilities; 10 • Radiated EMI measurement facilities above 1GHz: 9 Applications returned with comments; none Applications carried over to the next meeting; none

● LIST OF ABBREVIATIONS used in Committee Activities section

Abbreviation	Full Name
AAN	Asymmetric Artificial Network
AMN	Artificial Mains Network
ANSI	American National Standards Institute
APD	Amplitude Probability Distribution
APLAC	Asia Pacific Laboratory 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
ECANB	EC Association of Notified Bodies
Ecma	Ecma International
EICTA	European Information, Communications and Consumer Electronics Technology Industry Association
EMCC	Electro Magnetic Compability 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）
GSO	Gulf Cooperation Council Standardization Organization
ICES	Interference-Causing Equipment Standards
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IS	International Standard
ISM	Industrial Scientific and Medical
ITE	Information Technology Equipment
LCL	Longitudinal Conversion Loss
MME	Multimedia Equipment
MOU	Memorandum of Understanding
MP（法）	Magnetic Probe

Abbreviation	Full Name
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
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

Serial Article – 11

Basic EMC standards developed by CISPR

By Masamitsu Tokuda

1. Foreword

CISPR develops basic standards and common standard on emissions and product standards on emission and immunity. In this paper I will mainly introduce basic standards on emissions.

2. EMC basic standards developed by CISPR

Table 1 shows a list of CISPR 16 series standards categorized in EMC basic standards among CISPR standards. These standards mainly define measurement methods, so they are basically EMC base standards similar to IEC 61000-4 series, but CISPR does not categorize them as such. Almost all of standards are developed by SC-A except CISPR 16-2-5 and CISPR 16-4-4 which are under the responsibility of SC-H (Limits for the protection of radio services). CISPR 16 standards are composed of CISPR 16-1 series standards (measuring equipment), CISPR 16-2 series standards (measurement methods), CISPR 16-3 CISPR (technical reporting), as well as CISPR 16-4 series (uncertainty, statistic and allowance setting).

3. Japanese version of CISPR EMC basic standards

MIC Telecommunications Bureau has the responsibility for adaptation of CISPR standards in Japan by delegating technical and political work to responsible committees organized for the purpose. Table 1 shows a list of standards endorsed by the Telecommunication council of MIC. CISPR 16-1 series standards on disturbance measuring equipment were all adopted except CISPR 16-1-5 on the calibration of EMC antennas. As to CISPR 16-2 series standards defining measuring methods, CISPR 16-2-1 on conducted disturbance measuring methods, CISPR 16-2-2 on disturbance power measuring methods and CISPR 16-2-3 on radiated disturbance measuring method.

International standards (the newest editions)	Names of Standards (Specification for radio disturbance and immunity measuring apparatus and methods)	Endorsed as Japanese standard by MIC Information Communication Council	Base International standards (Edition: release year)
CISPR16-1-1 (Ed.4.0:15-09) [CISPR/A]	Radio disturbance and immunity measuring apparatus – Measuring receiver	October 2016	CISPR 16-1-1 (Ed.3.1:10-11)
CISPR16-1-2 (Ed.2.0:14-03) [CISPR/A]	Auxiliary equipment – for conducted emissions measurement	July 2007	CISPR 16-1-2 (Ed.1.1:04-06)
CISPR16-1-3 (Ed.2.1:16-03) [CISPR/A]	Auxiliary equipment – for radiated emissions	July 2017	CISPR 16-1-3 (Ed.2.0:04-06)
CISPR16-1-4 (Ed.3.2:17-01) [CISPR/A]	Measuring antenna and testing site	October 2016	CISPR 16-1-4 (Ed.3.1:12-07)
CISPR16-1-5 (Ed.2.1:16-12) [CISPR/A]	Antenna calibration testing field for 30 - 1,000MHz	July 2007	CISPR 16-1-5 (Ed.1.0:03-11)
CISPR16-1-6 (Ed.1.1:17-01) [CISPR/A]	Immunity measurement apparatus: EMC antenna calibration	-	-
CISPR16-2-1 (Ed.3.1:17-06) [CISPR/A]	Measurement method for the conducted disturbance	September 2011	CISPR 16-2-1 (Ed.2.0:08-10)
CISPR16-2-2 (Ed.2.0:10-07) [CISPR/A]	Measurement method for the power of radiated disturbance	December 2010	CISPR 16-2-2 (Ed.1.2:05-09)
CISPR16-2-3 (Ed.4.0:16-09) [CISPR/A]	Measurement method for radiated emissions	March 2009	CISPR 16-2-3 (Ed.2.0:06-07)
CISPR16-2-4 (Ed.1.0:03-11) [CISPR/A]	Measurement method for immunity	-	-
CISPR TR 16-2-5 (Ed.1.0:03-11) [CISPR/H]	Method of in-situ measurement of radiated emissions	-	-
CISPR TR 16-3 (Ed.3.2:15-09 [CISPR/A]	Technical Report of CISPR	-	-

Table 1 Base CISPR Standards and MIC endorsement for Japan (as of October 2017)

References: (Omitted as all are in Japanese))

Masamitsu Tokuda

1967 Graduated from Electronics Engineering Department of Hokkaido University
1969 Joined NTT, assigned to the Electrical Communications Laboratories
1987 Leader of EMC study group
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 department of new region creation science of the graduate school of Tokyo University

Major prize 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 2017 IEEE EMC Symposium

By Technical Subcommittee

VCCI participated in “2017 IEEE International Symposium on Electromagnetic Compatibility.” VCCI held a tutorial session to promote the new VCCI rules in the US where the largest portion of VCCI overseas members exists. Taking this opportunity we had meetings with ANAB, A2LA and ANVLAP with each of whom VCCI has MOU signed up. Taking this opportunity in the US we also had a meeting with ITI.

Venue:	The Gaylord National Resort & Conference Center National Harbor, Maryland, USA
Period:	August 7 – 11, 2017
VCCI Participants:	August 6 – 10, 2017　Used August 6 for rehearsal of our tutorial session
VCCI Participants:	Mr. Shinji Mine, Chair, Steering Committee (NEC Platforms)
	Mr. Minoru Hirahara, Chair, Steeling Committee (Fujitsu Advanced Technology)
	Mr. Akira Oda (Director, VCCI)
	Mr. Naoyuki Tsurumi (Director, Administration, VCCI)
	Mr. Toshiki Shimasaki (Vice Dept. Manager, VCCI)
	Ms. Yoko Inagaki (Program manager, VCCI)

1. The gist of the symposium

Technical Program was composed of Workshop & tutorial, Technical sessions, Special sessions, Panel discussion and Exhibition.

VCCI held a tutorial session arranged by the Steering Committee in the morning of August 7 under the title “New VCCI COUNCIL RULES in Japan to suite to Multimedia Equipment corresponding to CISPR 32 Ed.2.0.

23 sessions in Workshop & Tutorials were held in the 3 days from August 7. Remarkable nature of the sessions this time was that new themes such as Military and IoT among others were involved. Some parts of sessions were broadcast online viewable from anywhere in the world.

Ⅰ.Workshop & tutorials

Time/date:　8:30 – 12:00, August 7, 2017

Venue:　The Gaylord National Resort & Conference Center, MARYLAND 3&4

The number of participants: 30

Background

To introduce the VCCI’s new rules based on CISPR 32 Ed.2.0 adopted in November 2016 first in the world.

Covered in this session were the policy on the revision of VCCI rules, their contents, differences from CISPR 32 Ed.2.0, guidance on the application, measurement facility registration tailored to the new rules and the practice of market sampling test.

Also introduced were Qs & As with VCCI members on the new rules in such a manner that the talk will become referenceable by regulators and service providers with an intention to start such service in their own countries too.

（1）The gist of tutorials

Introduced was a forerunner case of Japan under the title of "New VCCI COUNCIL RULES in Japan to suite to Multimedia Equipment corresponding to CISPR 32 Ed.2.0." Things covered in the presentation included the interpretation of the new rules and guidance on the implementation.

（2）Arrangement of the Tutorial

Moderator : Naoyuki Tsurumi, Director of the administration office, VCCI

① "VCCI's point of view of the new rules" (30 minutes) by Akira Oda, VCCI Director

- Greeting with the introduction of VCCI
- Policy behind the revision of the VCCI rules
- Revised rules for market sampling test operation and efforts in the field

② "Enactment and operation of the new VCCI rules and the contents of a measurement facility registration" (45 minutes) by Shinji Mine, Chair, VCCI Steering committee

- The gist of the new rules
- Consideration on the transient period
- Key changes in the operation of measurement facility registration
- Frequently asked questions on the operations under the new rules

<30 minute break>

③ "Contents of the new technical standard and the guidance for operation" (90 minutes) by Minoru Hirahara, Chair, VCCI Technical Subcommittee

- New technical requirements
- Deviation from CISPR 32 Ed.2.0
- Introduction of the guidance on the transient to the new rules

④ Qs & As

（3）Evaluation

The symposium went well as attended by many people including those of ITI and ANAB. Qs & As session that followed was also proceeded lively with many questions asked to make the session very useful. We were grateful that some participants came to us and thanked us for our service by coming from Japan.

（4）Remarks

As a part of our activities to promulgate VCCI's new rules we had an opportunity to engage in a VCCI tutorial session in the site of IEEE EMC 2017. The Qs & As session went well with lively and deep discussions with

the participants including experts who contributed to the development of CISPR 32 Ed.2.0. We think we should increase opportunities for running sessions like this one in the future too to serve VCCI oversea members.

IEEE EMC 2017 logo mark

Guide to the VCCI tutorial session


Dr.Inoue together with all presenters in the session


Chair Mr. Tsurumi


Mr. Oda on his presentation


Mr. Mine on his presentation


Mr. Hirahara on his presentation

Ⅱ.Meeting with ANAB

Time/date: 15:30 – 16.30, August 8, 2017
Venue: The Gaylord National Resort & Conference Center
Participants:
ANAB: Mr. Randy Long Accreditation manager
VCCI: Mr. Mine Chair, VCCI Steering Committee
Mr. Hirahara Chair, Technical Subcommittee
Mr. Oda Director, VCCI
Mr. Tsurumi, Director of administration
Mr. Shimasaki, Vice Technical manager
Ms. Inagaki, Program manager

Purpose

ACLASS of the US under the MOU contract with VCCI changed its name to ANAB two years ago. This was the first opportunity for us to meet them renamed. This meeting was arranged for the information exchange with each other on the new rules of VCCI based on CISPR 32 Ed.2.0 already applied in Japan, on which ANAB has not yet been updated.

Proceedings

（1）Update on VCCI

1）New VCCI rules based on CISPR 32 Ed.2.0 and guidance for then by Mr. Oda

① Recent status of VCCI including its organization

② Transitions on the number of VCCI members

③ Recent status on the measurement facility registration program

④ Update on conformity verification reporting

⑤ Update on the Market Sampling Test operations

⑥ The gist of the operation of VCCI in accordance with ISPR 32 Ed.2.0, the transient period and the statistics on the application of the new rules

（2）New Technical and supplementary requirements by Mr. Hirahara

① On the new technical requirements Time line up to the enactment, the structure of the Technical Requirements and their differences from CISPR 32 Ed. 2.0

② The gist of the guideline

（2）Update on ANAB

ANAB bought off ACLASS last year and is now working on the transfer of its business to ANAB which is expected to complete in December 2017

（3）Discussions

ANAB said that they are in the middle of work transfer form ACLASS by focusing on the measurement facility registration and certification. They have an intention to pattern after the VCCI ways of implementation of new scheme for product registration based on CISPR 32 Ed.2.0. ACLASS is also intended to update their web site to cover the MoU with VCCI in a way to pattern after VCCI in tackling CISPR 32 Ed.2.0 based operations. They asked VCCI to verify the content of the ANAB's revised rules before its finalization.

VCCI thanked ANAB that they renewed the MOU with VCCI.

（4）Remark

It was the first meeting with ANAB which was in the middle of operational reform after buying out ACLASS. We would like to provide them with whatever assistance they need in their endeavors to get full-fledged with an EMC registration operator. We think it is important for VCCI to keep communication channels open with overseas counterparts in getting updated on the world EMC situations referenceable for our operations. Therefore, we think it is important for VCCI to keep convening face-to-face information exchange meetings like this one in the future too because it will help us obtain higher reliance from our members and related organizations.

With ANAB in the exhibition hall

Ⅲ. Meeting with A2LA

Time/date: 14:00 – 15:00Hr, August 9, 2017

Venue: The Gaylord National Resort & Conference Center

Participants:

A2LA: Mr. Jordan Acton, Senior Accreditation Officer

Ms. Megan Riebau, Senior Accreditation Officer

VCCI: Mr. Mine, Chair, Steering Committee

Mr. Hirahara, Chair, Technical Subcommittee

Mr. Oda, VCCI Director

Mr. Tsurumi, Director of administration

Mr. Shimasaki, Vice Technical Manager

Ms. Inagaki, Program Manager

Purpose

A2LA of the US under the MOU contract with VCCI precipitates in the IEEE EMC every year. We had meeting with them as usual taking advantage of attending the same convention. First we thanked them for renewing the MoU in May. Then we updated them with the gist of CISPR 32 Ed.2.0 VCCI implemented in Japan.

Proceeding

(1) Update on VCCI (the same contents for the presentation to ANAB)

(2) A2LA update

Ms. Megan Riebau briefed on A2LA Status Report

① Current accreditation status

② Typical causes of "Fail" in certification in the testing labs

③ New topics in A2LA

④ Introduction of education and training programs

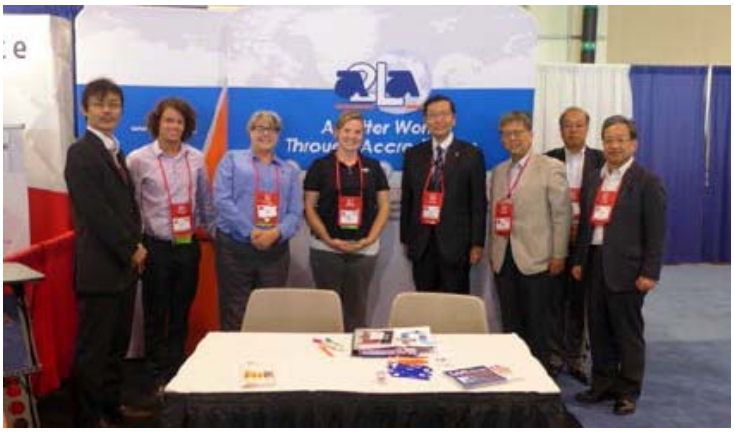
(3) Discussions

First VCCI asked A2LA what kind of measurement facilities are registered in A2LA. A2LA responded that they would answer the question in email later. In return they asked us if measurement facilities already registered to VCCI for pre- CISPR 32 testing purpose must go through the process of re-registration. Our

answer to that question was “Not necessary if the facilities are used for testing of ITE in the present state, but if the testing targets are multimedia equipment, then new registration of the facility is necessary.” A2LA informed us that the current inventory of VCCI accredited sites are 98, 3 sites more than the last year. As for new registrations based on CIPR 32-1 they have 15 sites registered. Lastly, VCCI informed then that it is VCCI’s intention to renew the MoU with A2LA for the next term.

(4) Remarks

We felt that the transition to CISPR 32 is smoothly progressed in the US too as the number of accredited testing laboratories is increasing. We think it is important to convene face-to-face meetings like this time with the US counterparts taking advantage of the participation in IEEE conventions. Meetings like this one will help keep us informed on the on-going situations, which in turn will enhance the of VCCI reliability.



With A2LA in the exhibition hall

Ⅳ. Meeting with NVLA

Time/date: 15:30 – 16:30, August 9, 2017

Venue: The Gaylord National Resort & Conference Center

Participants:

NVLAP: Mr. Dana S. Leaman Chief
Mr. Mario Guerrero Program manager
Ms. Bethany E. Hackett Program manager

VCCI: Mr. Mine, Chair, Steering Committee
Mr. Hirahara Chair, Technical Subcommittee
Mr. Oda VCCI Director
Mr. Tsurumi Director of administration

Mr. Shimasaki Vice Technical Manager

Ms. Inagaki Program Manager

Purpose

NVLAP with which VCCI exchanges MOU is a regular participant in IEEE EMC. This face-to-face meeting was arranged for information update with each other. From the VCCI side we thanked NAVLP for the renewal of the MOU between the two organizations and then updated them on the VCCI rules based on CISPR 32 Ed.2.0.

Proceeding

(1) Update by VCCI on the recent situation in Japan (basically the same as the story presented in the meeting with ANAB).

(2) Update by NVLAP on the VCCI registration status

74 sites have been registered in total of which 19 sites were VCCI-CISPR 32 based filings. Registration with both V-3 and VCCI 32-1 makes up 42% of the total registration.

(3) Information exchange

NVLAP asked us about the description to accompany the measurement facility registration to which VCCI answered. Lastly we updated on the MOU by informing them that it is observed without problem and VCCI wishes its continuation in the future.

(4) Remarks

We came to know that NVLAP is also transforming to CISPR 32 based operations. In order for us to maintain the current MOU with NVLAP we like to regularly convene face-to-face meetings with the counterparts including NVLAP while gathering related information in the US. The both parties agreed to meet in the next year again synchronized with the IEEE EMC Symposium.

At NAVLAP booth in the exhibition hall

V. Meeting with ITI

Time/date : 19:00 – 21:00Hr, August 10, 2017

Venue: The Gaylord National Resort & Conference Center

Participants:

ITI TC5: Mr. Richard Worley Acting for ITI TC5 Chair,
7 members of ITI TC5

VCCI: Mr. Mine, Chair, Steering Committee
Mr. Hirahara, Chair, Technical Subcommittee
Mr. Oda, VCCI Director
Mr. Tsurumi, Director of administration
Mr. Shimasaki, Vice Technical Manager
Ms. Inagaki, Program Manager

Purpose

VCCI makes it a practice to have face-to-face meetings with ITI, the organization to bundle IT related companies of the US, by taking advantage of our participation in IEEE EMC. This time we updated them on the recent situation concerning VCCI operations and new VCCI rules based on CISPR 32 Ed.2.0 as a seed for information exchange.

Proceeding

The meeting was moderated by Mr. Richard Worley as the Chair. Following the presentations by ITI TC5, VCCI made two presentations as a seed for discussion.

（1）VCCI updated on the recent situations (the same contests presented at the meeting with ANAB).

（2）Information exchanges

ITI asked us to explain the differences of VCCI rules from CISPR 32 Ed.2.0. To this request we responded that the VCCI document for the tutorials should be referred to, as the contents were presented in the session. Another question went, “Is the use of a wooden table not allowed in the guidance?” Our answer was as follows. “We do not say it is not usable. The purpose of the guidance is to avoid factors to impact the results of conformity verification testing. In the guide we recommend the use of a Styrofoam top for reference. We expanded our discussion to the situation in BSMI and other counterparts on their readiness for the implementation of CISPR 32 Ed.2.0. As to BSMI we mentioned that we invited them to the VCCI International Forum to be held in Tokyo in October.

We agreed that the next meeting with ITI should be held in the period of IEEE Long Beach, CA.USA in 2018.

（3）Remarks

This meeting with ITI was very useful as members of ITI are also members of VCCI, so information exchanged included concrete questions on measurement method and situations in other countries in terms of readiness for implementing CISPR 32 Ed.2.0 among other things. Lastly we invited ITI to the VCCI International Forum scheduled in October.

We like to strengthen the tie with ITI by way of exchanges of useful technical information for years to come.

A scene of the meeting with ITI (1)

A scene of the meeting with ITI (2)

Ⅵ. Others

（1）Report on major sessions – Keynote, Workshop & Tutorial, Technical, Special and Exhibition

1）Keynote

① Keynote speech by Julius Knapp under the title " Archiving EMC in an everything wireless world"

New services to be initiated in the US using 3.5GHz wireless and 5GHz mobile communications service are to utilize the frequency bands up to 71GHz. EMC technologies in such environment will play vital roles as the electromagnetic environment in the future will be like running devices in the soup of noises.

2）Workshop & Tutorial

① Mr. Mike Violette made a presentation under the title "The IEEE IoT Initiative & EMC."

Presented in his talk was a roadmap for the frequencies to be allocated to wireless communications and various examples of combinations between wireless features and variety of equipment. Key argument was that it will be vitally important to prevent malfunctions from occurring in the environment in which wireless devices will be expanded from B2B devices to drones etc. in IoT applications.

This issue should be followed by VCCI as well.

3）Technical sessions

Held on August 8 – 10 with the following main topics.

① The session under the title "EMC Measurements" included the following papers among others.

"Improving the Accuracy of Radiated Emissions Measurement for Frequency Below 30MHz by

using a Fiber Optic Isolated Rod Antenna."
Discussed here is the following. By realizing this scheme of the connection with rod antenna, use of optical fibers can reduce the use of coaxial cables. Remaining problem would be the improvement in the sensitivity

② The sessions under the title "Reverberation Chamber" covered 5 papers.
"Calibration of Reverberation Chambers form S21 Measurement" among others discussed a method of the calibration by quantifying the electromagnetic field generated within reverberation chambers by a simplified calibration of measurement based on S21 which largely reduces measuring time and highly improves the accuracy.

③ The optimization of the coupling in the power supply of DDR in EMC for Emerging Wireless Technologies Part 2 discusses the optimized coupling at DDR power supply and the simplification of radiated emission measurement by assessing the conditions for nearfield and long range testing between MIMO antenna and the transmitter.

4) Exhibition held in the period of August 8 – 10 in the Exhibition hall.
Of 115 participating companies only two were from Japan. The many exhibitions were on measuring apparatuses. There were related exhibitions run by ANAB, A2LA and NVLAP with whom VCCI has a MOU contract.

(2) Remarks

In the exhibition this year new sessions on Military and IoT were added mainly by university professors and R & D researchers of private companies. Papers from Japan were small in number. They were mostly by university professors and R & D researchers of private companies. The next IEEE & APMC will be held in Singapore in the period of May 14 – 17, 2018 and 2018 IEEE EMC will be held in Long Beach in the period of July 30 – August 3, 2018. Also EMC Sapporo & APEMC 2019 is planned in the period of June 3 – 7, 2019.

We were given an appraisal comment by a prominent person Mr. Don Heirman of US IEEE EMC as follows. "VCCI is doing a good job by releasing a guideline on the EMI measurement as a result of real application tests by themselves. We hope VCCI will keep releasing outcomes of their study." It is an intention of VCCI to regularly participate in IEEE EMC in the future too for us to better serve VCCI members and strengthen ties with overseas counterparts including ITI TC5 for information exchanges.

A scene of the Symposium

Introduction of VHS-LISN in the exhibition

The Gaylord National Resort & Conference Center used as the site for the convention

Report on EMC EUROPE 2017 Angers, France

By Technical Subcommittee

Participated from VCCI in the subject conference to present a VCCI paper adopted and attended other presentations of our interest

Venue:	ESEO Graduate School of Engineering, Angers, France
Period:	September 4 – 8, 2017
VCCI Participants:	Mr. Shinichi Okuyama, Technical Subcommittee (NEC Platforms)
	Mr. Kunihiro Osabe, Technical Subcommittee (VCCI)
	Mr. Hidenori Muramatsu (VCCI)

1. The gist of the symposium

Technical Program was composed of Keynote Speeches, Tutorials, Workshops and Technical sessions. The number of audiences was approximately 470. In the Technical sessions 285 papers were registered from 40 countries. From Japan 17 presenters were listed in the symposium including those on the poster sessions. Two VCCI papers adopted were those by Mr. Okuyama and Mr. Osabe.

2. Papers from VCCI

Mr. Osabe presented his paper in Measurement and Instrumentation 1 and Mr. Okuyama in Measurement and Instrumentation: Antenna.

① Termination impedance for AC Mains Cable Leaving from EUT Area in Radiated Emission Measurement (Mr. Osabe, Mr. Kuwabara and Mr. Okuyama of VHF LISN WG, VCCI)

Regarding the influence of the terminating conditions of power cable to radiated emissions, the terminating condition of VHF-LISN is 50Ωagainst the ground while the terminating condition of CDNE is common mode impedance150Ω. There was a question asked as to which condition is closer to real radiated field strength. “50Ω is best for the purpose” was the answer. To this answer there was an additional question on how that conclusion was obtained as the result of actual measurements and simulations. We responded that it was proved by the measurement of impedance in the simulated condition at 14 testing sites specifically arranged for the testing. The simulated condition was set in such a way that it was maximized for emission generation.

② Measurement and Estimation of Minimum Antenna Height for Free-space Antenna Impedance (Mr. Okuyama, Enoshima, Makino and Muramatsu of the Antenna calibration WG)

In general the antenna factors are calibrated in height 2m, but due to the influence from the ground plane the impedance is changed, which in turn will give impact to the sensitivity of the antenna. In order to investigate this problem we conducted experiments to get the antenna height to have the antenna impedance concentrated by overcoming various technical problems of site environment. To explain the measurement scheme we showed photos of the actual site for understanding.

3. Details

・Keynote speeches

Sessions we attended were as follows.

① EMC Challenges on Modern Aircraft – History and Future Prospects

Reported were efforts of AIRBUS company on EMC technologies – today and future. Concrete and amazing stories were given to draw the interest of audience: In the development of A350-900 the total length of cable was 160Km, the number of connectors is 100,000 and materials for EMC protection weighs as much as 1 ton. Therefore it is important for cooperation among suppliers of parts etc. for close cooperation between them.

② Automated Driving - New Challenges

In automobile industry while the automatic driving is in progress the industry is facing with new technical challenges as in the following two examples. One is that automatic driving of airplanes is very complex and needs many sensors and radars. Also important is the safety regarding EMC in automatic flight control. Therefore, solutions to EMC problem are vitally important.

・Workshops

Main sessions we attended were as follows

① Conducted emission reduction for motor drives in industrial sites

Discussed here was reduction of conducted emission from motor drive sections. Problems to solve the problem are conducted emissions from motor driving facilities etc. There is a fundamental similarity with the common mode current channels over the power cables.

・Technical sessions

What follow are the gist of the sessions we attended.

① APD Outdoors Time-Domain Measurements for Impulsive Noise characterization

A proposal was made on a new scheme to separate impulse noise from signals by using the time domain in the APD measurement in the outdoor environment where impulse noises are abundant.

② Experimental analysis of the effects of antenna tilting on antenna types and test results in consideration of Measurement Uncertainties

A comparison was made between the case in which antenna tilting was applied and not applied in the measurement using bi-conical, LPDA and hybrid antennas. Not much difference was observed with bi-conical antenna, but considerable difference was recognized in vertical polarization of LPDA. Also considerable differences were observed both in horizontal and vertical polarizations of HYBRID antenna.

③ The importance of overload revealing in EMI receivers

Overloading of EMI receivers largely impacts the measurement results, so the use of attenuators and pre-selectors at the pre-stage are important. There is no description on the overloading in the calibration method for EMI receivers prescribed in CISPR 16-1-1, so overloading is likely to occur on the EMI receivers in actual measurement. In some cases there will be no warning for the overloading in actual cases, so care must be taken.

④ Loop antenna calibration with inclusion of vector network analyzer and comparison

Reported here was a comparison using a network analyzer of the three antenna calibration methods against other methods of loop antennas to verify its advantages

⑤ Assessment of the Electromagnetic Environment Hardware Control Room in Cinema and Concert Hall.

Reported was on the results of the validation by actual measurement and simulation of EMC environment in a movie theater and a hardware control room of a concert hall.

⑥ Impact of antenna height and tilting on the measurement above 1GHz in anechoic chambers

Emission measurements were carried out at 1GHz in the following three conditions. They were (1) the antenna height fixed to 1m, (2) the height swept 1 - 4m, and (3) the height swept in combination with tilting. The result was that condition (2) got the radiated emissions as much as 11dB higher than in condition (1) in the sweep of 1 - 4m. In condition 3 in which tilting and sweeping were combined the radiated emission further got 4-5 dB higher.

4. Comments

Presentations by VCCI in EMC EUROPE 2017 Symposium gathered many comments from the audience to encourage us. Lively discussion was also worthy of mentioning. In the symposium this time many papers discuss antenna tilt for radiated emissions. As to emission above 1GHz the sweep of antenna height is under discussion in CISPR (CISPR/I/565/CD and CISPR/H335/DC) so it is likely to move toward that direction. As to testing site the investment is necessary to implement antenna tilt and testing time will increase. Therefore, it will be necessary to investigate the problem deeper.

EMC EUROPE 2018 is planned to be held in Netherlands. VCCI Technical Subcommittee should study the problem with experiments and contribute the results to the symposium positively and promote discussions with influential people in the opportunities.

At the entrance of the site

A scene of the exhibition site

A scene of presentation (Mr. Osabe)

A scene of presentation (Mr. Okuyama)

Status on FY2017 Market Sampling Test Operations

Market Sampling Test Subcommittee

As of October 31, 2017

Planned number of Market Sampling Tests	Loan-based	45	100
	Purchase-based	55	

Sampling test Grand total	Selected	Cancelled (unrealized shipment, etc.)	Owner's consent pending	Testable samples	Test completed	Judgment awaited	Judgment			
							Passed	Failed - tentative		
								Finally passed	Finally failed	Pending
Grand total	83	4	10	69	48	1	42	0	0	5
Previous month grand total	62	4	6	52	35	3	28	0	0	4
Loan-based testing total	46	4	8	34	22	1	19	0	0	2
1st Quarter	12	2	1	9	6	0	5	0	0	1
2nd Quarter	12	1	2	9	7	0	6	0	0	1
3rd Quarter	22	1	5	16	9	1	8	0	0	0
4th Quarter	0	0	0	0	0	0	0	0	0	0
Purchase-based testing total	37	0	2	35	26	0	23	0	0	3
1st Quarter	20	0	0	20	20	0	18	0	0	2
2nd Quarter	6	0	0	6	6	0	5	0	0	1
3rd Quarter	11	0	2	9	0	0	0	0	0	0
4th Quarter	0	0	0	0	0	0	0	0	0	0

Final Result

Passed	Failed	Pending
42	0	5

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Document inspection	Selected	Cancelled (withdrawal, etc.)	Owner's consent pending	Inspectable samples	Pre-check completed	Judgment awaited	Judgment completed	Judgment	
								Cleared	Problems identified
	33	0	0	33	30	5	25	23	2

Report from the Secretariat

● List of Members (August 2017 ～ October 2017)

Change of Company Name

Membership	Member No.	Company Name	Country	Former Company Name
Regular	210	Maxell, Ltd.	JAPAN	HITACHI MAXELL, LTD.
Regular	3185	Yokogawa Test & Measurement Corporation	JAPAN	Yokogawa Meters & Instruments Corporation
Regular	3255	Hitachi Systems Field Services, LTD	JAPAN	Hitachi Systems Techno Services, Ltd.
Regular	3583	TOKIN Corporation	JAPAN	NEC TOKIN Corporation
Regular	3727	Technicolor Pioneer Japan K.K.	JAPAN	Technicolor(China) Technology Co., Ltd.
Regular	286	Hewlett Packard Enterprise Company	USA	Silicon Graphics International Corporation
Regular	400	APC by Schneider Electric	USA	American Power Conversion Corp.
Regular	1090	McAfee, LLC.	USA	McAfee Inc
Regular	3078	Google LLC	USA	Google Inc.
Regular	3530	ARRIS	USA	Aurora Networks, Inc., A Pace Company
Regular	3654	C+A Global	USA	C&A Licensing LLC
Regular	3777	Digital Check Corporation	USA	Digital Check Corp.

Request : In case of any change in your company name, please kindly advise VCCI.
Use the “Notice of Change” at VCCI Website.

Withdrawal Members

Membership	Member No.	Company Name	Country
Regular	293	Sanyo Chemical Co., Ltd.	JAPAN
Regular	1017	Plustek Inc.	CHINESE TAIPEI
Supporting	3322	Electromagnetic Testing Services Ltd	U.K.

● VCCI Events Calendar

FY2017

April ・Exhibition at TECHNO FRONTIER	**May** ・Exhibition at COMPUTEX TAIPEI	**June** ・Release VCCI Dayori No.125
July ・VCCI Business Reporting Meeting ・Release Annual Report	**August**	**September** ・VCCI Training Basic Course for Measurement Engineers ・Release VCCI Dayori No.126
October ・VCCI Course for Measurement Engineers up to 1GHz ・Exhibition at CEATEC JAPAN ・VCCI International Forum	**November**	**December** ・VCCI Seminar on Automated and Manual Measurement ・Release VCCI Dayori No.127
January ・VCCI Technical Symposium	**February**	**March** ・Release VCCI Dayori No.128

● State of Conformance Report Submitted（V-2+VCCI 32-1）

（July 2017 ～ September 2017）

					July 2017			August 2017			September 2017		
			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	50	1	51	36	3	39	34	1	35
	Tabletop type	WS, Desk-top PCs, etc.	B 2	b 2	1	12	13	1	22	23	3	11	14
	Portable type	Note PCs, Tablet PCs, etc.	C 2	c 2	0	53	53	1	43	44	0	23	23
	Others	Office Computer, Wearable computers, etc.	E 2	e 2	6	3	9	1	2	3	3	9	12
Peripherals/Terminals Equipment	Storage Device	HDD, SSD, USB Memory, Media drives, etc. Disk drives, NAS, DAS, SAN, etc.	G 2	g 2	12	36	48	5	16	21	4	16	20
	Printer	Printer (Compound equipment included), etc.	H 2	h 2	4	9	13	4	16	20	5	6	11
	Display	CRT displays, Monitor, projector, etc.	J 2	j 2	12	38	50	8	46	54	27	54	81
	Input/Output Device （excluding Auxiliary Memory, Printer, Display）	Image scanners, OCR, etc.	M 2	m 2	4	8	12	6	8	14	3	9	12
	General Purpose Terminal	Display control terminals, etc.	N 2	n 2	0	0	0	0	2	2	0	1	1
	Exclusive Terminal	POS, Terminal for Financial and Insurance use, etc.	Q 2	q 2	17	0	17	5	0	5	8	4	12
	Other Peripherals Equipment	Others (PCI cards, Graphics cards, Mouse, Keyboard, etc.)	R 2	r 2	8	30	38	9	48	57	18	37	55
Audio visual equipment	Broadcast receivers	Television, Radio, Tuner, Video recorder, Set-top Boxes, etc.	K 2	k 2	0	1	1	0	0	0	0	0	0
	Audio equipment	Speaker, Amplifier, IC recorder, MP3 player, Headsets, etc.	L 2	l 2	1	6	7	1	12	13	0	8	8
	Video/Camera equipment	Digital video cameras, Web cameras, Network cameras, Video players, Photo frames, Digital-camera, etc.	I 2	i 2	8	15	23	7	16	23	0	14	14
	Others	Other Audio visual equipment	P 2	p 2	0	1	1	2	3	5	2	2	4
Copying Machine/ Compound equipment	-	Copying Machine/Compound equipment, etc.	S 2	s 2	2	1	3	1	5	6	1	2	3
Communications Equipment	Terminal equipment	Mobilephone, Smartphone, PHS telephones	T 2	t 2	0	3	3	0	3	3	0	5	5
		Telephone Equipment (PBX, FAX, Key Telephone System, etc.), Cordless telephones	U 2	u 2	6	2	8	2	0	2	2	0	2
	Network related equipment	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, TA, etc.)	V 2	v 2	0	0	0	1	3	4	2	1	3
		LAN Equipment (Rooter, HUB, etc.), Switching-node, etc.	W 2	w 2	42	28	70	58	8	66	43	5	48
	Others	Other Communications Equipment	X 2	x 2	13	11	24	12	6	18	12	9	21
Entertainment and educational equipment	Electronic stationeries	Electronic dictionaries, Electronic book readers, etc.	D 2	d 2	0	0	0	0	1	1	0	0	0
	Electronic toys	Game machines, Game pads, Toy drones, etc.	Y 2	y 2	0	3	3	0	2	2	0	2	2
	Lighting control equipment for entertainment	Lighting control equipment for entertainment	Z 2	z 2	0	0	0	0	1	1	0	0	0
	Others	Others (Navigator, etc.)	F 2	f 2	0	1	1	1	0	1	0	0	0
Others			O 2	o 2	O 2	o 2	12	13	25	3	5	8	5
Total					198	275	473	164	271	435	172	221	393

● State of Conformance Report Submitted（VCCI 32-1）

（July 2017 ～ September 2017）

					July 2017			August 2017			September 2017		
			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	32	0	32	17	1	18	18	1	19
	Tabletop type	WS, Desk-top PCs, etc.	B 2	b 2	1	8	9	1	16	17	3	9	12
	Portable type	Note PCs, Tablet PCs, etc.	C 2	c 2	0	43	43	1	38	39	0	11	11
	Others	Office Computer, Wearable computers, etc.	E 2	e 2	2	1	3	0	2	2	2	2	4
Peripherals/Terminals Equipment	Storage Device	HDD, SSD, USB Memory, Media drives, etc. Disk drives, NAS, DAS, SAN, etc.	G 2	g 2	3	15	18	2	8	10	1	3	4
	Printer	Printer (Compound equipment included), etc.	H 2	h 2	1	4	5	1	9	10	1	4	5
	Display	CRT displays, Monitor, projector, etc.	J 2	j 2	3	2	5	1	10	11	3	16	19
	Input/Output Device （excluding Auxiliary Memory, Printer, Display）	Image scanners, OCR, etc.	M 2	m 2	3	7	10	5	2	7	2	6	8
	General Purpose Terminal	Display control terminals, etc.	N 2	n 2	0	0	0	0	0	0	0	1	1
	Exclusive Terminal	POS, Terminal for Financial and Insurance use, etc.	Q 2	q 2	9	0	9	0	0	0	4	2	6
	Other Peripherals Equipment	Others (PCI cards, Graphics cards, Mouse, Keyboard, etc.)	R 2	r 2	1	18	19	6	17	23	10	20	30
Audio visual equipment	Broadcast receivers	Television, Radio, Tuner, Video recorder, Set-top Boxes, etc.	K 2	k 2	0	1	1	0	0	0	0	0	0
	Audio equipment	Speaker, Amplifier, IC recorder, MP3 player, Headsets, etc.	L 2	l 2	0	2	2	1	4	5	0	7	7
	Video/Camera equipment	Digital video cameras, Web cameras, Network cameras, Video players, Photo frames, Digital-camera, etc.	I 2	i 2	2	2	4	1	7	8	0	9	9
	Others	Other Audio visual equipment	P 2	p 2	0	1	1	1	3	4	2	0	2
Copying Machine/ Compound equipment	-	Copying Machine/Compound equipment, etc.	S 2	s 2	0	1	1	0	1	1	0	0	0
Communications Equipment	Terminal equipment	Mobilephone, Smartphone, PHS telephones	T 2	t 2	0	2	2	0	2	2	0	1	1
		Telephone Equipment (PBX, FAX, Key Telephone System, etc.), Cordless telephones	U 2	u 2	5	0	5	0	0	0	1	0	1
	Network related equipment	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, TA, etc.)	V 2	v 2	0	0	0	0	1	1	0	1	1
		LAN Equipment (Rooter, HUB, etc.), Switching-node, etc.	W 2	w 2	17	12	29	13	3	16	19	2	21
	Others	Other Communications Equipment	X 2	x 2	0	3	3	10	3	13	2	6	8
Entertainment and educational equipment	Electronic stationeries	Electronic dictionaries, Electronic book readers, etc.	D 2	d 2	0	0	0	0	0	0	0	0	0
	Electronic toys	Game machines, Game pads, Toy drones, etc.	Y 2	y 2	0	1	1	0	2	2	0	0	0
	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.)	F 2	f 2	0	0	0	1	0	1	0	2	2
Others			O 2	o 2	10	6	16	2	1	3	3	0	3
Total					89	129	218	63	130	193	71	103	174

● State of Registration of Measurement Facilities (Newly registered or renewed)

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 (August 2017 – October 2017)

R: Field strength measuring facility C: Mains Port Conducted interference measuring facility T: Communication Port Conducted interference measuring facility G: Radiated EMI measurement facilities above 1GHz

No	Company name	Equipment name	3 m	10 m	30 m	Dark 3m	Dark 10m	Registration number	Effective date	Location	Contact to:
12099	LTA Co., Ltd.	LTA No.1 Shielded Room	-	-	-	-	-	C-4948	2020/9/10	243, Jubug-ri, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea	82-31-323-6008
12100	LTA Co., Ltd.	LTA No.1 Shielded Room	-	-	-	-	-	T-2416	2020/9/10	243, Jubug-ri, Yangji-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea	82-31-323-6008

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Before putting down a pen

Halloween

In October in recent several years witches, hobgoblin and pumpkin are conspicuously displayed in TV commercials and supermarkets. The origin of Halloween is a festival of the Celts in ancient days. The end of a year then was October 31 when the summer ends and the winter begins. It was believed that the spirits of the deceased will visit their family members in Halloween. People wore a mask and made a blazing fire in order to protect themselves against appearing spirits and witches. This is the origin of the such Halloween customs as that children masquerading as witches visit neighbors asking for sweets and that people enjoy Halloween parties by cooking cakes with pumpkin etc. etc. Also although it is not known by many people, but green pumpkins sold in supermarket is called "Squash" in English to be strict which cannot be referred to as pumpkin. The name of green pumpkin-like vegetables is not called pumpkin but "Squash." Pumpkin with the color of orange can only be called "pumpkin." I have never had heard the word "Halloween" in my early days, so I have never experienced whatever events closed to Halloween in my childhood. In Japan Halloween has become one of the biggest event of Japan before I know it. Every year a news is dispersed around the world that the scrambled cross of Shibuya is clouded like hell with people confusing traffics around the area to the degree of impossibility. Standard annual news known to the world is that police officers are shouting in the loudspeakers ordering the crowd to observe traffic rules. If you know such helter-skelter facts in the evening of Halloween night in Tokyo you will be skeptical about the original spirit of the Halloween night. What do you think? (J.I.)

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