

VCCI DAYORI

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Visit to Disaster Stricken Area of The Great Earthquake of 1923 —Memories of nameless people

Yukio Sueyoshi

I walked around several areas in Tokyo stricken by the Great Earthquake (September 1, 1923). In digging through what nameless people did at the instance on the day I noticed that it is not only the fate that split the fate of people on that day. I came to know there were many lessons to learn and incidents moved us greatly, which I believe we should reference in great earthquakes to happen in the near future.

■ People in the Asakusa Koen Park who saved the life of 70 million people

The Sensouji temple in downtown Tokyo which is visited by many sightseers from abroad today....But almost no people knew activities of the common people who saved the Kannon-doh temple from the great fire. The temple keeper explains that it was divine favour of the Kannon budda and trees of ginkgo trees there that saved the Kannon-doh temple. But the fact was that it was bucket brigade made of evaluated people of row houses who frantically stopped the spread of a fire by relaying waters from Tensui oke bucket, reservoir and the Hyotan-ike pond. Who commanded the fire fighting? It was Asakusa park brigade of No. 5 firestation cooperated by eight scaffolding men headed by Onokichi Baba. Their frantic fire-fighting activities saved the life of 70,000 evacuees and saved Kannon-do and Nitemmon from the fire.

■ The Ryouunkaku building broken in half

There is a block near Sensohji temple called “Rokku,” the place where Asakusa entertainment hall was. In this block there stood was 12-floored Ryouunkaku which was the highest building in then Japan. This building was broken in two by the great earthquake. Nobody knew how many people were killed under the debris. It came crashing down and instantly killed all performers on the stage and audience in the seats. The vicinity was the center of red-light district and the day was Saturday, September 1, so a lot of people were there. Around the vaudeville theater chairs and tables were falling down from the sky. It was said that fairly large furniture flew like leaves of the tree by whirlwind. Buildings made of bricks suffered extensive destruction in the earthquake as with the case of Ryouunkaku. This fact changed the trend in design of construction from bricks to concrete (The Ryouunkaku building was made of bricks up to the 10th floor and wood for 11th and 12th floor). Having heard that there is a monument around here, I walked around searching it. People asked by me for the location said they have no idea where. Finally a sight seeing Rikisha man told me where. It was the next to the entrance of a Pachinko parlor. The picture here is the monument next to the pachinko parlor.



■ Tragedy of the Shin Yoshiwara

My walk for the north direction from Rokku along the Senzoku shopping mall for about 15 minutes took me to the previous red-light district of Shin Yoshiwara (The Yoshiwara prostitute quarter officially approved by the Edo Bakufu government). The 11 o'clock and 58 minutes when the Kanto Great Earthquake hit was still in the sleeping time for the Yujo prostitutes. In addition the Yoshiwara red-light district was enclosed by high walls to prevent Yujo prostitutes from escaping and the gate was locked from the outside. Yujo prostitutes engulfed in flames had no way but jumped in the Benten-ike pond one after another. They jumped in to stack up in the pond so there was no way for them to survive. In no time the pond turned to the inferno. 490



yujo licensed prostitutes died in Benten-ike pond. If someone had acted sensibly and unlocked the outside lock of the gate then they would have been saved. It's a pity. The big Kannon Buddha image standing on the mound near the Tenshi shrine is the Yoshiwara Kannon Buddha erected in 1926 for the repose of the soul of drowned people in the pond. It is said that this place is popular as a divine spot among young women today. On the day of my visit the place there was a group of several young women there. Some said simply, "Maria statue is pretty" (Kannon Buddha image in actuality). This is tomb of people who died in the war (the Great Kantoh Earthquake in actuality). The sad fate of licensed prostitutes would be the last thing they can imagine.

■ The army clothing department where 38,000 people killed

10 minutes walk from JR Ryogoku station via the Ryogoku Kokugikan will get you Yokozuna-cho park where there once was the Clothing department of Japanese Army. The place sized 20,430 tsubo (approximately 80,000 square yard) was still a vacant lot at the time of the great earthquake occurred. People in burning Tokyo who thought the place is the best evacuation place came there with a rush pulling Daihachi guruma (large-sized hand-cart) with a stack of household effects on it. They unloaded the load there and were seeing the fires far away. But those stacked up household effects created a hell. Come evening, wind from the south was changed to wind from the west, which brought a gust of wind, tornado and firely column to the vacant lot. Great many household effects cluttered here and there blocked people from escaping the place. People and goods were tossed up and thrust down by the gust of wind. Those who narrowly escaped the inferno jumped in the Sumida river and drowned to death. Total number of people killed there was over 38,000 (which amounted to more than the half of total death in the city Tokyo). In this place stands now a memorial shrine. Not far from the shrine there also is "Resuscitation memorial hall". Memorial service is held there on September 1 (for the Kanto great earthquake) and March 10 (for the Tokyo great air raid).

■ Sakuma-cho and Izumi-cho, miracle of the Kanto Great Earthquake

There are Kanda Sakuma-cho and Kanda Izumi-cho across the Showa dori street near JR Akihabara station. The Mitsui Memorial Hospital is near there. 1,630 houses there were called "The miracle of the Kanto Great

Earthquake.” Here remains a story which moves me.

The place was a heavily built up area with tenement houses and others, typical of down town. When the Great Kanto Earthquake broke out the area soon became a sea of fire by the strong wind. Just when people started evacuation toward the Ueno station the leaders of the town like the Chairman of the town association and Diet members appealed to people as follows. “All of you of this town should not run away. Please come together with pails and buckets.” With this call people recovered their senses. This place was subject to banter of Edokko (Edo people) as fires frequently broke out there. Town people were reminded of training of firefighting they have long been engaged in to remove the disgrace that has long been attached to their name. Unfortunately, all the fireengines of the Manseibashi firestation responsible for the area were out for the Nihonbashi ward following the order from up above. The town people frantically fought the fire alone by bucket relay of the water of Kanda river. In the following morning the roof of two-storied wooden school building of the Sakuma elementary school caught the fire. When all people thought that is the end there stood up boys. They were junior highschool students graduated from the elementary school catching the fire. They started bucket relay of their own. They stack up desks and chairs in the second story of the schoolroom, broke the roofs from inside and fought the fire desperately. People around the place moved by school kids desperately battling with the fire joined the fire fighting. It became the fire fighting enabled by prayer and power of many people. The fire was finally extinguished around 6 o'clock in the morning of September 2. In January 1926 Tokyo city government decided to reserve the place as “The place of firefighting by the power of town’s people.” The picture is the monument standing near today’s Isumi elementary school.



Yukio Sueyoshi

Born in 1948

1972 Graduated from the Economic Department, Keio Gijuku Daigaku university
Joined Nihon Keizai Shinbun Inc.

1990 Assigned to Nikkei America

2003 Executive director, Nikkei Research

2008 Standing auditor, the same company

2013 Retired, now the director of NPO juridical person “Party to create the society without neglected community”

Committee Activities

● Steering Committee

Dates	November 19 and December 17, 2014 and January 21, 2015
Agenda items	● 1. Members admitted in October – December, 2014 ● 2. FY2015 Activity plan ● 3. FY2015 budget ● 4. VCCI mark display on Class A equipment ● 5. Display on the equipment ● 6. VCCI mark indication on the product cartons and brochures ● 7. The formation and operation mode of the Steering Committee and policy on the treatment of multimedia equipment ● 8. FY2015 Revision of Rules for Voluntary Control Measures ● 9. Secretariat office of the Radio Wave Noise Committee ● 10. Event on the VCCI 30th anniversary ● 11. Membership rules for VCCI-CLUB
Pending business	● Agenda item 3. Review of FY2015 budget ● Agenda item 7. Deliberation in the Task Force ● Agenda item 10. Project for VCCI 30-year anniversary
Decisions made and reports given	● Agenda item 1. Approved new members applied in October – December ● Agenda item 2. Approved with partial modification ● Agenda item 4. Decided to propose it as a part of 2015 revision of Rules for Voluntary Control Measures ● Agenda item 5. Approved the answer to the question in FAQ ● Agenda item 6. Approved the answer to the question in FAQ ● Agenda item 8. Will handle the question in FAQ on the applicable year of the Rules for Voluntary Control Measures. “Registration of acknowledgement” in Article 9 is to be changed to “Acknowledgement of reception” ● Agenda item 9. Explanation by the secretariat was accepted ● Agenda item 11. Draft of the secretariat was approved ● Reporting item 1 Report for the months of November 2014 through January 2015 by subcommittees (Technical Subcommittee, International Relations Subcommittee, Market Sampling Test Subcommittee, Communication Subcommittee and Education Subcommittee) ● Reporting item 2 Secretariat report on membership changes and the number of conformity verification reports filed for the period of October to December ● Reporting item 3 Budgetary execution status (on membership fees and each project) for the October – December period

	● Reporting item 4 On the participation in ECMA TC20 Augsburg meeting in October ● Reporting item 5 On the participation in R&TTE and EUANB meetings in December ● Reporting item 6 On VCCI seminar held in Industrial Technology Institute, Miyagi Prefectural Government
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● Technical Subcommittee

Dates	November 10, 2014 and January 23, 2015
Agenda items	● 1. FY2015 activity plan of the subcommittee and WGs ● 2. Responses to comments received on the proposed revision of the Technical Requirements for FY2015 (1st round on technical matters) ● 3. Presentation materials for 2015 rules revision and technical symposium ● 4. Method of site evaluation and EUT measurement by using FAR as described in CISPR32 ● 5. DC document on VHF-LISN proposed to CISPR I/WG2 ● 6. Site validation by using shortened dipole antenna ● 7. New VCCI Technical Requirements based on CISPR32
Pending business	● Agenda item 1. Discussions on the purpose and work completion date of each WG ● Agenda item 4. Continue information exchange meeting between JBMIA, JEITA and VCCI on FAR requirement ● Agenda item 5. Analysis of comments from member bodies on DC document on VHF-LISN ● Agenda item 6
Decisions made and reports given	● Agenda item 2. Revisit to the revised Technical Requirements to be released in April 2015 ● Agenda item 3. Convening 2015 rules explanation meeting combined with technical symposium on January 16, 2015 ● Agenda item 7. New VCCI Technical Requirements is going to be based on multimedia equipment standard

● International Relations Subcommittee

Dates	November 14 and December 12, 2014
Agenda items	● 1. Preparation for the VCCI International Forum 2015
Pending business	● Agenda item 1. Preparation for the Forum 2015 ● Agenda item 2. Negotiation with candidate locations for the overseas workshop

● Market Sampling Test Subcommittee

Dates	November 7 and December 5, 2014 and January 16, 2015
Agenda items	● 1. Report on the analysis of failed-cases in FY2013 ● 2. Document inspection ● 3. Follow-up on “failed cases” ● 4. Revision of the Technical Requirements ● 5. Policy, plan and budget for FY2015 ● 6. Others
Pending business	● Agenda item 3. Of 5 cases of “Failed tentative” 2 cases were finalized as “Passed” for the reasons that one is due to the problem of the sample only and the other due to commitment to changes of the user manual. The remaining three are still under investigation.
Decisions made and reports given	● Agenda item 1. Reported to the board of directors of October 31 on the eight cases of “Failed” in FY2013, which was the worst in the history of VCCI market sampling test. Comments given by the board members included necessity of revisit to sampling schemes. ● Agenda item 2. Performed 14 cases of document inspection. All were cleared. ● Agenda item 4. ① A proposal to change the way to indicate the revision date of V-2 Rules for Voluntary Control Measures to be more synchronized with that of normative annexes was turned down. ② There is discrepancy on page number indication between Japanese version and English version of Test Report in V-3 Technical Requirements. It was decided that revision this time will include the change on page numbering of the Japanese version. ● Agenda item 5. Plan on FY2015 will include the following among others. Financial support to the sample providers to compensate the transport expenses in taking back tested samples, fact finding on the display on Class A ITE, suggestion about the scheduled self sampling test on the mass production line and others. ● Agenda item 6. Several products were found at shopfront without VCCI mark indicated. Contacted owner VCCI member committed to correct the problem. Will consider what actions to be taken against VCCI members apparently not following members’ duty.

● Education Subcommittee

Dates	November 13 and December 11, 2014 and January 22, 2015
Agenda items	● 1. Questionnaire on the 9th course on Radiated EMI measurement above 1GHz ● 2. Plan on starting the Automatic/Manual measurement course ● 3. Renewal of materials and equipment for training ● 4. Education course plan for FY2015
Pending business	● Agenda item 2. Determine the purpose and contents of lectures and continue discussions on the development of course texts ● Agenda item 4. Continue discussions about the education on the measurement facility registration which was raised in the VCCI problem solving taskforce
Decisions made and reports given	● FY2014 track record • Telecommunication port conducted EMI measurement course scheduled on November 7 was cancelled because the number of enrollees was small • 7 enrollees attended the 9th course on Radiated EMI measurement above 1GHz held on November 20 and 21, 2014. ● Plan on new educational equipment and materials was approved for use from the coming fiscal year. ● Plan on education and training program for FY2015 Consider merging the telecommunication port conducted EMI measurement course with the course for measurement engineer course

● Communication Subcommittee

Dates	November 7 and December 5, 2014 and January 9, 2015
Agenda items	● 1. 0 yen note ● 2. Running ad in technical magazines ● 3. FY2015 calendar ● 4. Consistency of terminology in advertisement ● 5. Activity plan and budget for FY2015
Pending business	● Agenda item 5. Will come back with plan in February meeting for finalization in March meeting
Decisions made and reports given	● Agenda item 1. Editorial work completed. It will be distributed to students in engineering departments via cooperatives in campus ● Agenda item 2. It was so arranged that VCCI ads will be carried in periodicals of the Institute of Electronics, Information and Communication (February issue), Shin Denki (February issue) and EMC (March issue) ● Agenda item 3. Decided to create 2015 calendar to be picked up by visitors to VCCI office and distribute it in the technical symposium etc. ● Agenda item 4. Today VCCI mark is used by VCCI as a symbol of “Safety,” “Security,” and “Trust” without consistent policy. Reviewed the situation this time resulted in the following, “Safety” is not relevant to VCCI so it was concluded to use “Security” in ads addressing general population and “Trust” in ads addressing professionals.

● Measurement Facility Registration Committee

Date	November 17, 2014
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); 21 companies • Radiated EMI measuring facilities; 11 • Mains ports conducted EMI measuring facilities; 9 • Telecommunication ports conducted EMI measuring facilities; 11 • Radiated EMI measurement facilities above 1GHz: 5 Applications returned with comments; none Applications carried over to the next meeting; none
Date	December 15, 2014
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); 13 companies • Radiated EMI measuring facilities; 9 • Mains ports conducted EMI measuring facilities; 10 • Telecommunication ports conducted EMI measuring facilities; 5 • Radiated EMI measurement facilities above 1GHz: 4 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	European association for standardizing information and communication systems
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)
ICES	Interference-Causing Equipment Standards
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IS	International Standard
ISM	Industrial Scientific and Medical
ISN	Impedance Stabilization Network
ITE	Information Technology Equipment
LCL	Longitudinal Conversion Loss
MOU	Memorandum of Understanding
MP	Magnetic Probe
MRA	Mutual Recognition Agreement/Arrangement

Abbreviation	Full Name
NCB	National Certification Body
NICT	National Institute of Information and Communications Technology
NIST	National Institute of Standards and Technology
NP	New Proposal
NSA	Normalized Site Attenuation
NWIP	New Work Item Proposal
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
SN	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
WP	Working Party

Jitter and BER

By Yuzo Usui

I explained the technique to widen the eye in the last issue and last but one. It is not a sufficient condition to secure wide eye in giga bit transmission. The amount of information viewed from the time axis is extremely large. Therefore, malfunction can occur in the probability multiplied by time if viewed in a long span of time like 1 hour, 1 day or even 1 year if the probability of 1 bit getting erroneous is small. The measure to express this malfunction is BER (Bit Error Rate).

Definite jitter and random jitter

The jitter I described in the 10th through 12th article occurs dependently on the data. The amount of this jitter occurrence is always the same against the same data. This jitter is called Deterministic Jitter (DJ).

Jitters created by random fluctuation included in the signal, on the other hand, are called Random Jitter (RJ). The cause of RJ is multiple such as the fluctuation of signal inherent in transmitters and receivers, fluctuation of PLL creating clocks from data, asymmetry of clock signal and fluctuation in power voltage and grounding among others.

Thermal noise

The main reason for the occurrence of random jitters is thermal noise. The thermal noise is the noise generated by the irregular motion of free electrons within circuit elements by the thermal vibrations. The frequency element of the thermal noise is constant over all ranges, so it is referred to as the white noise.¹⁾ The voltage of the thermal noise is proportional to the square root of the product of the resistance multiplied by the absolute temperature. That is the reason why we cool the amplifier which is required to be low noised.

Figure 1 indicates the sine waves superimposed whose amplitude is 1 and frequency ranging from 1 to 700 with random phases. If several peaks of 700 signals are overlapped the composite wave creates large amplitude. The bar chart of Figure 2 indicates the distribution of the amplitude of Figure 1 sampled at constant intervals. This distribution gets regular as indicated with the red line.

1) The light compositing all frequency elements gets white. For this reason it is called white noise.

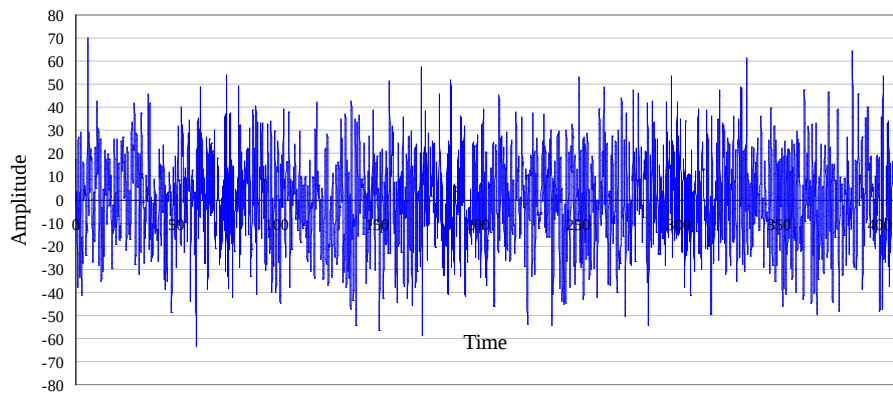


Figure 1 An example of composition of 1f – 700f

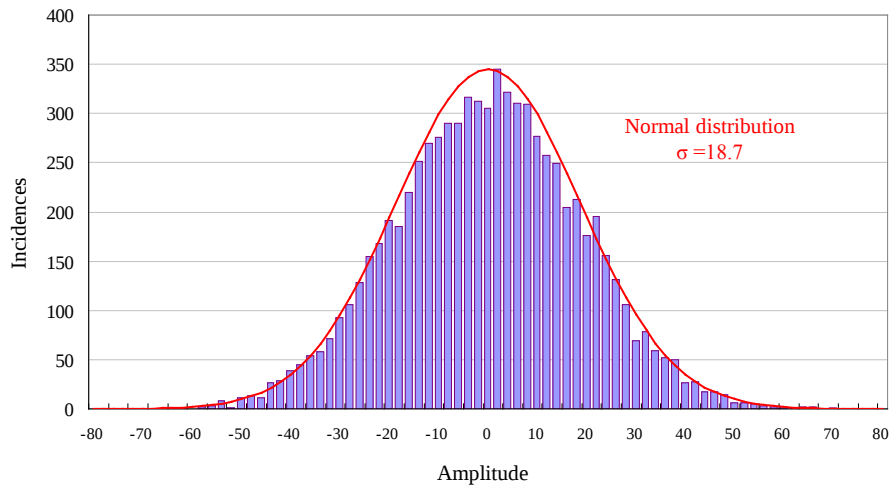


Figure 2 Amplitude distribution

Bit Error Rate (BER)

The sum of DJ and RJ make Total Jitter. The condition being equal, DJ is always reproducible while RJ, coming with distribution whose spreading foot needs to be taken into consideration. The foot of normal distribution never gets zero. The probability of its coming under $\pm \sigma$ (σ being standard distribution) is 68.3% or 99.7% within $\pm 3\sigma$, etc.

See the red line in Figure 2. The occurrence probability of amplitude above $\pm 60\%$ looks almost zero, but if the Y axis is expressed in logarithm you will see the occurrence probability of amplitude ± 60 is almost 0.01 or 1%.

Take the case of transmission rate being 3.125Gbps for instance. If the speed is 3.125Gbps the number of the bit transferred in 1 second is 3.125×10^9 bits. In Figure 3 the occurrence probability of amplitude becomes 0.32×10^{-9} (the inverse number) is approximately ± 124 . In this case the amplitude of 124 appears at the probability rate of once in every second. This is out of the graph of linear scale in Figure 3. It just shows the amplitude in this scale appears with this kind of probability when transfer rate gets high.

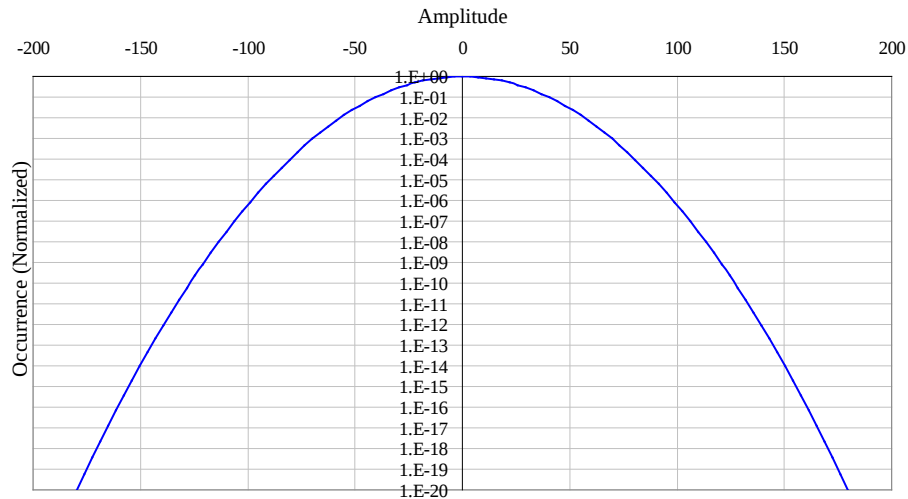


Figure 3 Normal distribution in logarithmic expression

The probability for the error to occur is referred to as bit error rate to be obtained by bits in error divided by the total number of bits. If 3.125Gbps data gets error once a day, for instance, bit error rate will be expressed by the following formula.

$$\frac{1}{3.125 \times 10^9 \times 60 \times 60 \times 24} = 3.7 \times 10^{-15} \dots\dots\dots (1)$$

Conversely if BER is 3.7×10^{-15} then MTTF gets 1 day.

Figure 4 indicates an example of a given DJ overlaid by RJ.²⁾ In this example the aperture of the eye which gets erroneous once a day is approximately 134ps. Even if the eye pattern is widely open it gets lot narrower if random jitter is added.

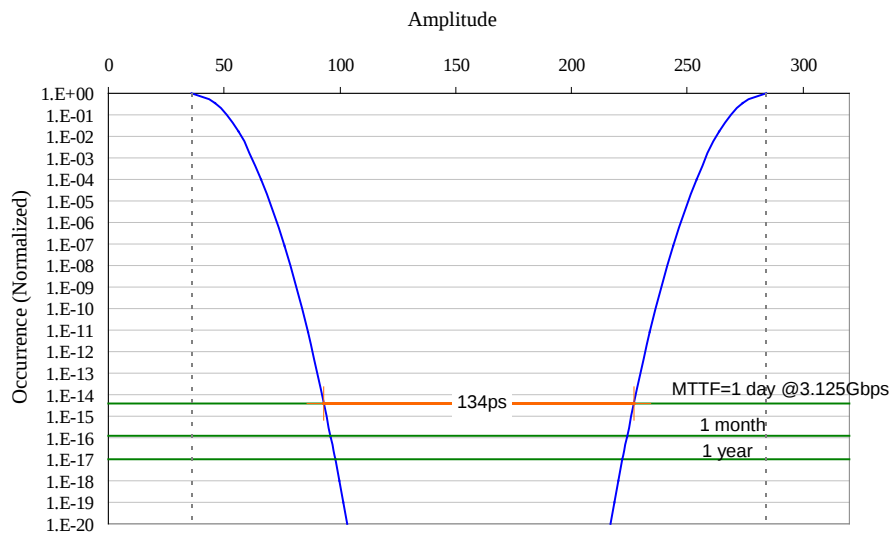


Figure 4 DJ and RJ

2) Strictly speaking, RJ starts at a point bit lower as DJ has a distribution of clear borderline (no broadening of the foot of the mountain).

Figure 5 indicates eye pattern superposed with the aperture of 134ps. Considering random noise against the observed eye pattern it is understood that the practical eye is narrowed down to areas indicated by the red line.

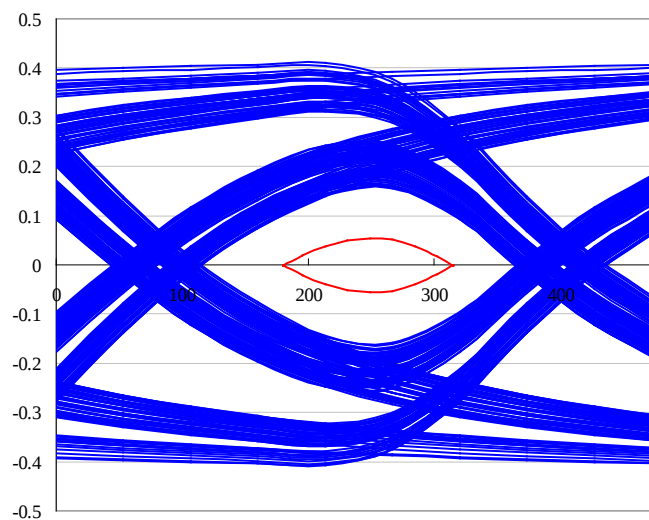


Figure 5 Eye pattern and eye aperture of MTTF 1 day

Up until 10+ years ago I thought the thermal noise was a problem of the pure analog circuit technology field associated with amplification of audio and weak signals, but today these problems are one of the most important themes in giga bit transmission field. In the field of EMC too needed technology field has constantly been widened, which gives me pressure to broaden the study area constantly.

This article concludes “EMC Viewed from Signal Transmission” continued for two years. Thank you very much for your reading.



Yuzo Usui

1946

Born in Oita prefecture and raised in Fukuoka prefecture

1970

Graduated from Electronics Engineering Course, Engineering Department, Kyushu Institute of Technology

1972

Master's degree granted from Engineering section, Graduate school of Tohoku University

Joined Fujitsu, engaged in circuit technology development throughout the profession life especially in the field of analog circuit and electrical packaging.

2001

Retired Fujitsu after assuming department manager of circuit technology department and technology headquarters

Joined Macnica

2008

Retired Macnica after assuming Manager of Technical Development Center, CTO and other positions

Self-employed consultant

Major literary work:

“All about distributed constant circuits for board designers (revised) self-financed publication in 2004. (<http://home.wondernet.ne.jp/~usuiy/>)

“Environmental Electromagnetic Engineering Handbook,” (coauthor) , Asakura Shoten, 1999
Many contributions to Nikkei Electronics, Nikkei Micro-device, Monthly EMC, Design Wave Magazine, Electronics, and Japan Institute of Electronics Packaging and others

Report on Attendance to Meetings of R&TTE-CA and EUANB

By Steering Committee & International relations Subcommittee

Foreword

R&TTE CA is an association organized by conformity assessment bodies and some manufacturers operating basically in Europe which are interested in R&TTE Directives (on radio equipment and communication equipment). They deal with technical matters ranging from conformity schemes, radio communication technology to measurement techniques. They regularly meet twice a year for discussion. The purpose of our visit to this meeting was to build cooperative relationship with accreditation bodies and testing laboratories in Europe while getting acquaintance with European engineers on one hand and to get VCCI known better by them on the other hand. We also attended a meeting of EUANB (EU Association Notified Bodies), a conference body for EMC certification machineries.

The 29th R&TTE CA meeting

- Date and time:** December 8, 2014 9:30 – 17:00hr.
Place: Excelsior hotel, Munich Germany
Participants: Total approximately 80, moderated by:
Mr. Nick Hooper, Chair, R&TTE-CA
Mr. Jan Coenraad, Secretary, R&TTE-CA
VCCI attendants: Mr. Mine, Chair, Steering Committee
Mr. Uchida, Chair, International Relations Subcommittee
Mr. Satake, Senior Managing Director
Mr. Oda, General Manager

1. Background

Following the release of RE directives (on wireless communication equipment) in May 2014, each member countries are busily reflecting it in place of R&TTE Directives in their national laws. Problems to implement them are forming a huge pile including transient period, subjected products and harmonized standards among others.

2. Proceedings

- (1) Started with greeting by Chair followed by confirmation of agenda items, minutes of the previous meeting and action items. Then proceeded with questions and discussions per agenda.

(2) R&TTE CA management report, member admission and administrative report

New members were admitted based on circulated document. Accounting report was approved.

(3) R&TTA CA

Discussion took place on the transient period of RE directives. EU Committee asks each member countries to nationalize the RE directives by June 13, 2016. After that either of RE directive or R&TTE directives can be applicable by June 13, 2016. After June 13, 2016 only RE Directives will be applied. As to the standards applied by the RE directives the EU committee says it will maintain the R&TTE list.

Also an interpretation was given that all equipment and products capable of wireless communication will be the subject to the RE Directives. As an example a washing machine capable of wireless communication was discussed. The conclusion was that it will be subjected to the RE Directives.

(4) R&TTE CA TGN (Technical Guidance Note) related matters

Introduced was “RED NOTIFIED BODY ACCREDITATION/NOTIFICATION ASSESSMENT DOCUMENT (V1.0)”. This is the first draft subjected to revision

- TGN20: R&TTE CA led discussion on the draft guidance to check its validity and conformity
- TGN18: “Requirement for Real Results in Test Report
- TGN17: “Guidance on EMF Requirements”

(5) EU Directives related matters

Discussion included the information notification duty (Article 36) by the notification organization

(6) Report of TCAM (Telecommunication Conformity Assessment and Market Surveillance Committee)

A report was made on the 6th TCAM EG meeting including a report by TCAM UK on 5 GHz RLAN (Wi-Fi router etc.)

(7) Collaboration with other organizations

① ADCO (Administrative Cooperation: working group related to R&TTE Directives)

Report included market surveillance campaign, risk assessment still under discussion, a guideline on common market surveillance, preparation of RE guide, battery testing. Also covered were the number of samples in mobile phone common surveillance and trend in non-conformity, CE mark on non-conforming products.

② The matters being paid attention to in ECC (Electronic Communication Committee) update included DFS (Dynamic Frequency Selection) at 5GHz band, ERC/REC (European Radio-communication Committee/Recommendation) 70-73 on 60GHz wide band data system and ECC/DEC (Decision)/(09)01 on 63-64GHz ITS.

③ Germany NB group (GNB) explained “Assessment of Safety Test Reports according to the R&TTE

Directive.” Main topics included testing based on EN60950-1 of battery for mobile phones, smartphones and tablet computers

(8) MRA related matters

- ① TCB (Telecommunication Certification Body) Council Workshop covered 5GHz WLAN, RF Lighting Part15 and/or 18, acceptance of electronic labels and FCC ID and others. Also introduced was the update on Industry Canada regarding IC Web site to be changed in April 2015. MRA activities of NIST covered the cooperative relationship with MIC of Japan, EMC Directives and RE Directives of Europe.
- ② The representative of MIC Japan introduced the outline of Japanese certification system (including the Radio Wave Act) and a track record of Japan - US MRA and Japan - EU MRA. Also he covered an update on Technical Conformity Mark (Giteki mark) of MIC radio law in terms of the change the mark size to 3mm from 5mm so that the mark is displayable on the product itself such as cleaning robot so consumers get a feeling of security. Also correct way to display Giteki mark was presented in the content of the market surveillance. Finally introduced was a plan on MRA International Workshop 2015 on March 4 and 5, 2015 and VCCI International Forum to follow on March 6.
- ③ Qs & As accumulated after Amsterdam meeting (May 2014) were introduced and discussed.

(9) Next meeting

Mid-April – Mid-May, 2015 in Sweden

The 16th EUANB meeting

Date and time: December 9, 2014 9:00 – 13:00hr.

Place: Excelsior hotel, Munich Germany

Participants: Total approximately 70, moderated by:

Mr. Steve Hays, Chair

Mr. Jan Coenraad, Secretary

VCCI attendants: Mr. Mine, Chair, Steering Committee

Mr. Uchida, Chair, International Relations Subcommittee

Mr. Satake, Senior Managing Director

Mr. Oda, General Manager

1. Background

EUANB (EU Association of Notified Bodies) is a conference body for European certification machineries. We attended the meeting as R&TTE CA participants. EMC Directives (2004/108/EC) will lapse on April 20, 2016 and the new directives (2014/30/EU) will take effect on the same day. There is no transient period defined, which is the biggest problem.

2. Proceedings

(1) Proceedings

Started with greeting by Chair, followed by confirmation of agenda, report and approval of the previous meeting and discussions theme by theme.

(2) Report on directives

① Status on the EMC Directives

The new directives was effectuated on March 28, 2014 but the period until April 19, 2016 is defined as transient period for each EU member country to nationalize it.

During this period manufactures and importers are not allowed to issue SDoC under the new directives and notified bodies cannot issue type approval certificates based on the new directives to manufactures and importers. The effective date will be April 20, 2016 without any transient period for manufactures and importers. The situation is the same for the LV Directives (Low Voltage Equipment Directives). EUANB is of the opinion that transient period until June 13, 2017 should be allowed, but it is not yet the final position.

② Two changes will be required on April 20, 2016 and June 13, 2016

The date of broadcasting receivers to be changed to equipment subjected to the RE Directive from LV Directives/EMC Directives is June 13, 2017. The transient period will be until June 13, 2017. Equipment to be out of the regulation of R&TTE Directives must be ready to meet the new EMC directives in approximately 2 months (April 20 – June 13, 2016). (Equipment coming under this category are PBX, telephones, facsimiles, routers and the like).

③ TTE to be exempted from RE directives will automatically be subject to EMC Directives and LV Directives without transient period.

④ NB is prohibited to issue certificate of test on type approval based on the new EMC Directives before April 20, 2016.

⑤ Report on EMC workshop in EUANB

Market surveillance is ready to start without delay. Validity of certificate will be effective from April 20, 2016.

(3) Collaboration with other organizations

① Activity report of Brian Jones, EMC consultant

② ETSI activity report

③ EMC ADCO activity report: Report on the market surveillance campaign

④ R&TTE ADCO activity report

(4) Report on standards and technical problems

① CISPR status

Report included CISPR35 (vote failed in March, it was adopted in EN55035), CISPR32 (Ed.2 under deliberation) followed by revision status of CISPR24, CISPR14 and CISPR15 among others.

② A report was given on the immunity calibration level needed in IEC61000-4-3

③ Equipment with wireless communication capability will be subjected to RE directives (example: washing machines)

(5) e-Compliance

Electronic compliance verification procedure is under study taking into consideration complex products and shortened product cycles by involving related industry associations and manufactures.

(6) Next meeting

Mid-April - Mid-May 2015 in Sweden

Impressions

The content of the meeting is exclusively for members only, but there were a lot of information considered to be useful for VCCI members in general. The fact that RE Directives will cover even home appliances with wireless communication features will be talked about sensationally as home appliances with wireless communication feature will be on the increase in the market. In the EUANB meeting convened at the same time with R&TTE CA the interpretation and explanation of the new regulation coming out of EMC Directives were discussed lively in terms of conformity assessment.



R&TTE meeting



with Mr. Jan Coenraads

The most concerned matter was transition from the old to new regulation. This timing is planned to be synchronized with the transition period of RE Directives. This time the meetings were attended by Radio Wave Department of MIC, manufactures and test houses of Japan as well as by VCCI. This fact may have impressed the European people of considerable attention paid by Japan to the regulatory movement in EU. It is our intention to share the information of this nature with VCCI members. The appropriate occasion for the purpose we consider is

VCCI International Forum, so we will invite key people involved in the matters as guest speakers of the Forum.

We think through our participation in the European meetings this time we were able to build a firm relationship with our counterparts out there. In order to keep and even enhance this good relationship with European organizations and people we should enhance outward activity in the future too, so we will be able to serve VCCI members better. Furthermore, we think it is important to share such information not only with VCCI members but with manufactures of home appliances and lighting fixture manufactures etc. in Japan and overseas too. This venture may need an extended framework beyond today's membership scheme.

Report on 2015 VCCI Rules Explanation meeting combined with Technical Symposium

By Steering Committee & Technical Subcommittee

Date and time: January 16, 2015 13:10 – 17:00hr.
Place: B2F Large hall of Kikai Shinko Kaikan
Number of attendees: Approximately 150

Program

Part 1 VCCI Rules Explanation

Time		Topics	Speakers
13:10 13:20		Opening	Shozo Satake Senior Managing Director, VCCI
13:20 13:30	Rules update	Rules for Voluntary Control Measures focused on parts to be revised in FY2015 (Steering Committee)	Shinji Mine, NEC Platforms Chair, VCCI Steering Committee
13:30 13:40		Technical Requirements focused on parts to be revised in FY2015 (Technical Subcommittee)	Ayataro Hoshi, Hitachi Information & Telecommunication Engineering Ltd. Chair, VCCI Technical Subcommittee
13:40 13:50		Qs and As	
13:50 14:10	Technical Symposium	Status of deliberation in CISPR16, CISPR22 and CISPR32/35 with focus on SC-A/I meetings in CISPR Frankfurt meeting (CISPR project WG)	Motoharu Mizutani, Toshiba Convener, CISPR Project WG, VCCI Technical Subcommittee
14:10 14:30		Proposed structure and contents of the Technical Requirements based on CISPR32 locally refined by MIC (CISPR32WG)	Ayataro Hoshi, Hitachi Information & Telecommunication Engineering Ltd. Chair, VCCI Technical Subcommittee
14:30 15:10		(1) Results of measurement of required items in FAR for the evaluation of FAR site over the frequency range 30 – 1000MHz. Effects of power cable arrangement were also analyzed. (2) Study of the size of test volume in radiated EMI measurement for 30 – 1000MHz from 3m distance (Radiated EMI measurement WG)	Yoshiaki Kaneko, Hitachi Information & Telecommunication Engineering Ltd. Convener, Radiated EMI WG, VCCI Technical Subcommittee Kazuyuki Makimoto, JQA Radiated EMI WG, VCCI Technical Subcommittee
15:10 15:30		Break	

Time		Topics	Speakers
15:30 16:00		“Report on verification of conducted EMI with battery fully charged” “Report on verification of conducted EMI from PoE Communication port” (Conducted EMI measurement WG)	Tsuyoshi Yamanaka, Intertech Japan, Convenor, Conducted EMI WG, VCCI Technical Subcommittee Yoshihisa Aotani NEC Platforms Conducted EMI WG, VCCI Technical Subcommittee
16:00 16:20		“Status on the standardization of VHF-LISN in CISPR” (VHF-LISN WG)	Shinichi Okuyama, NEC Platforms Convenor, VHF-LISN WG, VCCI Technical Subcommittee
16:20 16:40		“Difference in the usability between hybrid antenna and bi-conical antenna in/log periodic antenna for the 3m measurement method” (Antenna Calibration WG)	Ikuo Makino, EMC laboratory, Fujitsu General, Convenor, Antenna Calibration WG, VCCI Technical Subcommittee
16:40 17:00		Qs and As (throughout the day’s program)	All speakers

Mr. Satake started out the symposium with his presentation summarized as follows.

- Significance of VCCI activities include the following. They are, to help create good electro-magnetic environment in Japan, to watch regulatory situations in the world to support Japanese manufactures’ overseas operations, to conform to international standards and fostering EMC engineers in Japan.

Mr. Mine briefed on the proposed 2015 revision of Rules for Voluntary Control Measures as follows

- Article 9: “Registration of acknowledgement” is proposed to be changed to “Acknowledgement of reception” in registration of product conformity to reflect actual practice to send back acknowledgement email.
- Article 10: Marking on Class A ITE is proposed to be allowed either of (1) warning text, (2) VCCI mark, or (3) both warning text and the mark.

Mr. Hoshi briefed on the proposed 2015 revision of Technical Requirements as follows.

- 5.2.2 AMN - There are multiple circuit diagrams indicated in CISPR 16-1-2 Ed1.2:2006 and ANSI C63.4:2003 or 2009. Under these circumstances picking up a specific diagram among them is misleading. So they are deleted.
- 5.3.3.4 - Delete the description about contact element including the note because the measurement facility is considered adequate as long as the value of site attenuation meets the standard.
- Normative Annex 1-3 - The calibration cycle for equipment made only of passive elements (such as antenna and AMN) may be once in every two years instead of “within a year” to harmonize with other accreditation bodies in Japan and overseas.

Q & A that followed was as follows

Q1: Why figures of AMN in Technical Requirements 5.2.2 was removed?

A1: There are multiple circuit diagrams indicated in CISPR16-1-2 Ed.1.2:2006 and ANSI C63.4 2003/2009. Under such circumstances it is better to just make reference to the name of the standard.

In the “Technical Symposium” part that followed, activities in FY2014 of each working group under the Technical Subcommittee were introduced as follows.

Mr. Mizutani talked about directions in CISPR and its Frankfurt meeting

- VCCI sends reps to CISPR/SC-I, MIC working team on SC-A and Japan CISPR study group
- SC-A matters: deliberation is going on regarding (1) calibration of antenna for EMI measurement, (2) correction of the phase center of LPDA antenna and the size of EUT for radiated EMI measurement.
SC-I matters: 2nd FDIS of CISPR32 was released with ballot closing date February 2015 and deliberation status on CISPR35 Ed.1 was also given
- Topics and decisions made in CISPR Frankfurt meeting in October 2014
 - Treatment of FAR after the release of CISPR32 Ed.2 – the CDV will become FDIS almost without fail, so it is necessary for VCCI to start to develop a concrete plan on measurement in FAR.
 - As to VHF-LISN CD preparation will start after terminating impedance and restriction of application were agreed on. VCCI is to determine the value of impedance with the purpose to have a single VHF-LISN standard agreed on.
 - As to test volume for 3m measurement distance VCCI will propose to CISPR the optimal test volume.
 - As to the in situ measurement in CISPR32 a proposal was made that rules be created by referring to CISPR16. VCCI, already allowing in situ measurement in the current Technical Requirement, will make a proposal to CISPR32

Convener Mr. Hoshi of CISPR32 working group talked about progress status of his working group and VCCI's contributions on pending issues in MIC CISPR32 localization team. FY2014 of VCCI has been started with drafting of the new Technical Requirements based on CISPR32 planned to become effective in April 2016. Basic stance of his working group is as follows.

- Basically follow the MIC draft in terms of the document structure
- Identified problems in drafting the new Technical Requirements include the following
 - ① Scope of self regulation
 - ② Option vs. module
 - ③ The size of EUT tested at the distance 3m
 - ④ Conformity verification test
 - ⑤ Application of uncertainty of measurement and its coverage by the test report
 - ⑥ In situ testing
 - ⑦ FAR testing method, allowance, facility evaluation and registration

- ⑧ Operational condition of telecommunication port
- ⑨ Conformity judgment for mass produced products
- ⑩ Handling of CISPR32 informative annexes (E, F, G and I)

Next, convener Kaneko of radiated EMI measurement WG presented issues on FAR to be adopted in CISPR32 Ed.2 as follows.

- Site evaluation by FAR was proven to be good in terms of evaluation method and procedures. It was confirmed that measurement result falls within standard value $\pm 4\text{dB}$
- It was confirmed that the reason why difference from standard value gets bigger is related to the distance between the antenna and surrounding absorbers. Such conditions differ from FAR to the next. Therefore, it is important to adjusting the sized of the test volume and placement positions.
- Experiments with real equipment on the placement condition of mains cable showed that cable placement condition other than that of the test volume affects the measurement results.
- Placement of mains cable will differ due to absorption structure of the FAR, the specification of the turntable and location and placement of power outlets. This means that the correlations between sites possibly be affected.

Next, Mr. Makimoto of Radiated EMI measurement WG talked about the effects of the size of test volume for radiated EMI testing at 3m distance in the frequency range 30MHz – 1000MHz.

- Reported in FY2013 was measurement results in the setting that the wave source set at the center as the reference source, and moved it around while the beam width of receive antenna and its types changed. Studied in FY2014 were difference between NSA evaluation and real machine evaluation, difference in measurement distance by the test volume and the effects of difference in EUT beam width and the wave source placed at 3m measurement distance.
- A conclusion obtained from the above experiments was that the validity of the size of test volume for the measurement of radiate EMI at 3m distance is affected by the directivity of receive antenna and the directivity of EUT emission.
- Measurement results can be different depending on the beam width and directivity of receive antenna. As the size of the test volume gets bigger, the effects of attenuation caused by distance gets bigger.
- A conclusion drawn from the above observation: It is necessary to revisit the Technical Requirements on the size of test volume for 3m measurement distance by taking into consideration receive antenna and wave source.

Presentation by Mr. Yamanaka of Conducted EMI measurement WG can be netted as follows.

- Conducted disturbance at the stage of battery fully charged differs from EUT to EUT, so the validity of test results may be questioned. To avoid such situation it will be necessary to do final measurement after confirming the max value of the disturbance measured in the stabilized state in preliminary

measurement.

Next, Mr. Aotani of Conducted EMI measurement WG presented the effects of the state of PoE (Power over Ethernet) to EMI from mains port as follows.

- Background of the study - In case a telecommunication port also supplying power was added it is assumed that it may affect mains port conducted EMI
- The test results showed that the assumption was correct. Therefore, when PoE communication ports are added it is necessary to revisit the mains port conducted EMI measurement.

Mr. Okuyama of VHF-LISN WG presented the status of standardization of VHF-LISN in CISPR following the international round robin tests on VHF-LISN.

- The outcome of the RRT showed that standardization of impedance of mains cable improved the correlations between measurement sites
- Of the three devices tested in the RRT, VHF-LISN showed measurement results closest to the measurement without device attached.

Lastly, Mr. Makino of the Antenna calibration WG presented the comparison of the usability between hybrid antenna, bi-conical antenna and log-periodic antenna in terms of radiation pattern, changes in impedance and cross-polarization characteristics.

- In comparison with bi-conical antenna and log-periodic antenna, difference in receive level by hybrid antenna is almost contained within 2dB, but it should be noted that there is the frequency at which the antenna factor changes sharply which affects receive levels so the use of hybrid antenna needs caution.
- Based on the comparison between the 3 types of antenna it is assumed that all types of antenna will have no problem in 3m measurement method except just one point of caution.

Qs & As that followed were as follows.

Q1: Can VHF-LISN be applicable to DC power too?

A1: Yes, it is designed to be used both for AC and DC power sources.

Q2: There was a presentation on the planned new VCCI Technical Requirements based on CISPR32. Now my question is, are AV equipment subject to VCCI control?

A2: Basically subject equipment of VCCI is information technology equipment, but it is our wish that multimedia equipment will bear VCCI mark too as the standard VCCI will conform with is CISPR32.

The symposium was closed with a note that materials used today will be opened in the VCCI website in PDF format.

Participants of the symposium were invited to social gathering held in the 5th floor of the building.



The hall for the symposium



Mr. Satake



Mr. Mine



Mr. Hoshi



Mr. Mizutani



Mr. Kaneko



Mr. Makimoto



Mr. Yamanaka



Mr. Aotani



Mr. Okuyama



Mr. Makino



All speakers



Greeting at the social gathering



Greeting at the social gathering



Greeting at the social gathering

Status on FY2014 Market Sampling Test Operations

Market Sampling Test Subcommittee

As of January 31, 2015

Planned number of market sampling tests	Loan-based		50		110					
	Purchase-based		60							
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	118	7	4	107	94	8	81	2	0	3
Previous month grand total	82	5	8	69	54	12	40	0	0	2

Loan-based testing total	57	6	2	49	48	4	41	2	0	1
1 st Quarter	14	2	1	11	11	0	10	1	0	0
2 nd Quarter	26	3	1	22	22	0	20	1	0	1
3 rd Quarter	17	1	0	16	15	4	11	0	0	0
4 th Quarter	0	0	0	0	0	0	0	0	0	0

Purchase-based testing total	61	1	2	58	46	4	40	0	0	2
1 st Quarter	20	0	0	20	20	0	20	0	0	0
2 nd Quarter	24	0	1	23	21	0	19	0	0	2
3 rd Quarter	17	1	1	15	5	4	1	0	0	0
4 th Quarter	0	0	0	0	0	0	0	0	0	0

Final Result

Passed	Failed	Pending
83	0	3

* One sample in Loan-based testing was reallocated to document inspection.

Document inspection	Selected	Cancelled (withdrawal, etc.)	Owner's consent pending	Inspectable samples	Inspection Completed	Judgment awaited	Judgment	
							Cleared	Problems identified
	41	1	2	38	36	2	35	1

Report from the Secretariat

● List of Members (November 2014 ~ January 2015)

New Members

Membership	Member No.	Company Name	Country
Regular	3615	b-plus GmbH	GERMANY
Regular	3622	Coriant Oy	FINLAND
Regular	3599	HappyOrNot Ltd.	FINLAND
Supporting	3598	Intertek Testing Services Ltd., Shanghai	CHINA
Regular	3610	Jabil Circuit (Shanghai) Ltd.	CHINA
Supporting	3619	Japan Automobile Research Institute	JAPAN
Regular	3617	Kinoma, Inc.	USA
Regular	3611	Lenovo Enterprise Solutions Ltd.	JAPAN
Regular	3616	Lynx Innovation Ltd	CHINA
Regular	3612	Meta Company	USA
Regular	3618	Shuttle Inc.	CHINESE TAIPEI
Regular	3620	Sony Mobile Communications Inc.	JAPAN
Regular	3600	Sumitomo Precision Products Co., LTD.	JAPAN
Regular	3624	TOHOKU TKR corporation	JAPAN
Regular	3613	ViewSonic International Corporation	CHINESE TAIPEI

Change of Company Name

Membership	Member No.	Company Name	Country	Former Company Name
Regular	218	AOI Development Center, Ltd.	JAPAN	AOF Imaging Technology, Japan Ltd.
Regular	3045	Delta Networks, INC.	CHINESE TAIPEI	DELTA NETWORKS, INC.
Supporting	2092	Gumi University EMC Center	KOREA	Gumi College EMC Center
Regular	3280	impactTV. INC	JAPAN	Sears Co., Ltd.
Regular	3237	MOL JAPAN CORPORATION	JAPAN	ONKYO DIGITAL SOLUTIONS CORPORATION
Regular	3415	NComputing Co., Ltd	KOREA	NComputing Global Services Sarl
Regular	451	SCREEN Graphic and Precision Solutions Co., Ltd.	JAPAN	DAINIPPON SCREEN MFG. CO., LTD.
Regular	1143	Zebra Technologies Corporation	USA	Motorola Solutions, Inc.

Withdrawal Members

Membership	Member No.	Company Name	Country
Regular	1832	CMO Japan Co., Ltd.	JAPAN
Supporting	1177	Mitsubishi Electric Europe B.V. EMC-Competence-Center	GERMANY
Regular	3482	TOKYO RADAR CORPORATION	JAPAN

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

● VCCI Events Calendar

FY2014

April • VCCI Basic Course for Measurement Engineers	May • VCCI Course for Measurement Engineers	June • Exhibition at COMPUTEX Taipei • VCCI Course Telecommunication Ports Conducted EMI Measurement • VCCI Business Reporting Meeting • Release VCCI Dayori No.113
July • VCCI Course of Rules for Voluntary Control Measures • VCCI Course on Radiated EMI Measurement Above 1GHz • Exhibition at TECHNO FRONTIER • Release Annual Report	August	September • VCCI Basic Course for Measurement Engineers • VCCI Course for Measurement Engineers • Release VCCI Dayori No.114
October • VCCI Course for Measurement Engineers • VCCI Course on Antenna Calibration and NSA Measurement	November • VCCI Course on Telecommunication Ports Conducted EMI Measurement • VCCI Course on Radiated EMI Measurement Above 1GHz	December • VCCI Course of Rules for Voluntary Control Measures • Release VCCI Dayori No.115
January • VCCI Rules Explanatory Meeting Combined with Technical Symposium	February • VCCI International Forum 2015	March • Release VCCI Dayori No.116

FY2015

April • VCCI Basic Course for Measurement Engineers	May • VCCI Course for Measurement Engineers • Exhibition at TECHNO FRONTIER	June • VCCI Course Telecommunication Ports Conducted EMI Measurement • VCCI Business Reporting Meeting • Release VCCI Dayori No.117
July • VCCI Course of Rules for Voluntary Control Measures (tentative) • VCCI Course on Radiated EMI Measurement Above 1GHz • Release Annual Report	August	September • VCCI Basic Course for Measurement Engineers • VCCI Course for Measurement Engineers • Release VCCI Dayori No.118
October • VCCI Course for Measurement Engineers • VCCI Course on Antenna Calibration and NSA Measurement	November • VCCI Course on Radiated EMI Measurement Above 1GHz	December • VCCI Course of Rules for Voluntary Control Measures (tentative) • Release VCCI Dayori No.119
January • VCCI Rules Explanatory Meeting Combined with Technical Symposium	February	March • Release VCCI Dayori No.120

● State of Conformance Report Submitted

November 2014 ~ January 2015

		Corresponding M o n t h	November 2014			December 2014			January 2015		
Classification		C l a s s	A	B	Total	A	B	Total	A	B	Total
Mainframe Computer (Super Computer, Server, etc)			28	2	30	29	2	31	30	1	31
Personal Computer	Desk-top type, etc.		2	12	14	2	9	11	1	9	10
	Note type, etc.		1	28	29	0	27	27	1	32	33
	Palm top type, etc.		0	3	3	0	2	2	0	0	0
Office Computer, Mini-Computer, Workstation, etc.			7	2	9	7	5	12	4	3	7
Peripherals/Terminals Equipment	Auxiliary Memory (Storage Device)		17	25	42	18	49	67	6	22	28
	Printer		6	4	10	4	3	7	4	7	11
	Display (LCD, CRT Display, etc.)		10	51	61	3	54	57	4	37	41
	Input/Output Device (excluding Auxiliary Memory, Printer, and Display)		3	14	17	4	35	39	2	29	31
	General Purpose Terminal (Display, Typewriter Terminal, etc.)		0	0	0	0	2	2	0	0	0
	Exclusive Terminal (POS, Terminal for Medical, Financial, and Insurance use, etc.)		14	1	15	23	2	25	4	9	13
	Others Peripherals		29	18	47	17	25	42	11	31	42
Copying Machine			1	1	2	7	1	8	1	1	2
Communications Equipment	Telephone Equipment (Fax, PBX, Telephone, Key Telephone System, etc.)		4	1	5	2	1	3	1	2	3
	Network Channel Terminating Equipment (Modem, Digital Transmission Equipment, DSU, Terminal Adapter, etc.)		6	3	9	3	3	6	1	11	12
	LAN Equipment (HUB, Repeater, Switching-node, Router, etc.)		58	17	75	35	13	48	29	18	47
	Other Communications Equipment (Switching Equipment in a Telecom Center, etc.)		26	5	31	26	7	33	32	3	35
Others (Digital-camera, Navigator, toy, MP3 Player, etc.)			4	52	56	5	25	30	9	41	50
Total			216	239	455	185	265	450	140	256	396

● 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 (November 2014 – January 2015)

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	会社名	設備名	3 m	10 m	30 m	暗 3m	暗 10m	登録番号	有効期限	設備所在地	問い合わせ先 TEL
10908	KYB 株式会社	開発実験センター 第一電波暗室	-	-	-	○	-	R-4168	2017/9/15	岐阜県加茂郡川辺町鹿 塩字白砂 1145-1	0574-26-6120
10909	KYB 株式会社	開発実験センター シールドルーム 2	-	-	-	-	-	C-4657	2017/9/15	岐阜県加茂郡川辺町鹿 塩字白砂 1145-1	0574-26-6120
10910	KYB 株式会社	開発実験センター シールドルーム 2	-	-	-	-	-	T-2200	2017/9/15	岐阜県加茂郡川辺町鹿 塩字白砂 1145-1	0574-26-6120
10911	KYB 株式会社	開発実験センター 第一電波暗室	-	-	-	-	-	G-806	2017/9/15	岐阜県加茂郡川辺町鹿 塩字白砂 1145-1	0574-26-6120
10947	LCIE Bureau Veritas	Ecuelles, OATS	○	○	-	-	-	R-4181	2017/10/26	Chemin des Hautes Peines 77250 Ecuelles-FRANCE	33-1-40-95-60-51
10948	LCIE Bureau Veritas	Ecuelles, OATS	-	-	-	-	-	C-4666	2017/10/26	Chemin des Hautes Peines 77250 Ecuelles-FRANCE	33-1-40-95-60-51
10949	LCIE Bureau Veritas	Ecuelles, OATS	-	-	-	-	-	T-2207	2017/10/26	Chemin des Hautes Peines 77250 Ecuelles-FRANCE	33-1-40-95-60-51
10950	LCIE Bureau Veritas	Fontenay-Aux-Roses, C01	-	-	-	-	-	G-816	2017/10/26	33 avenue du General Leclerc 92260 Fontenay-Aux-Roses-FR ANCE	33-1-40-95-60-51
10952	Asia Institute Technology (DongGuan) Limited	AIT Conduction No.1	-	-	-	-	-	T-2208	2017/10/26	No.22, jinQianLing Street 3, JiTiGang Village, HuangJiang Town, DongGuan, GuangDong, China 523765	86-769-82020495
10953	日星電気株式会社	10m 電波暗室	-	-	-	○	○	R-4182	2017/10/26	静岡県浜松市西区大久 保町 1509 番地	053-485-4705
10954	日星電気株式会社	10m 電波暗室	-	-	-	-	-	C-4667	2017/10/26	静岡県浜松市西区大久 保町 1509 番地	053-485-4705
10955	日星電気株式会社	10m 電波暗室	-	-	-	-	-	G-818	2017/10/26	静岡県浜松市西区大久 保町 1509 番地	053-485-4705
10956	HCT Co., Ltd	HCT Co., Ltd. 10m Semi Anechoic Chamber	-	-	-	-	-	G-819	2017/10/26	467-811 74, 578-gil, Seoicheon-ro, Majang-myeon, Icheon-si, Gyeonggi-do, KOREA	82-31-645-6440
10974	SGS-CSTC Standards Technical Services Co., Ltd.	10m Semi-Anechoic Chamber	-	-	-	○	○	R-4188	2017/11/16	No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China	86-755-25328579

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10975	SGS-CSTC Standards Technical Services Co., Ltd.	10m Semi-anechoic Chamber above 1GHz	-	-	-	-	-	G-823	2017/10/26	No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China	86-755-25328579
10976	The Standards Institution of Israel (SII)	Electrics & Telematics Laboratory, EMC Branch (SAC)	-	-	-	○	-	R-4189	2017/10/26	Semi-anechoic chamber: 42 Chaim Levanon Str., Tel Aviv, 6997701 Israel	972-3-6465069
10977	The Standards Institution of Israel (SII)	Electrics & Telematics Laboratory, EMC Branch (OATS)	-	○	-	-	-	R-4190	2017/11/16	OATS: Kibbutz Nativ Ha-Lamed Hei, Israel	972-3-6465069
10978	The Standards Institution of Israel (SII)	Electrics & Telematics Laboratory, EMC Branch	-	-	-	-	-	C-4675	2017/10/26	42 Chaim Levanon Str., Tel Aviv, 6997701 Israel	972-3-6465069
10979	The Standards Institution of Israel (SII)	Electrics & Telematics Laboratory, EMC Branch	-	-	-	-	-	T-2211	2017/10/26	42 Chaim Levanon Str., Tel Aviv, 6997701 Israel	972-3-6465069
10980	The Standards Institution of Israel (SII)	Electrics & Telematics Laboratory, EMC Branch	-	-	-	-	-	G-824	2017/10/26	42 Chaim Levanon Str., Tel Aviv, 6997701 Israel	972-3-6465069
11014	キヤノン株式会社	キヤノン取手 E7 電波暗室	-	-	-	-	-	G-831	2017/12/29	茨城県取手市白山 7-5-1	0297-74-2111
11015	Hangzhou TDT Technologies Co., Ltd	EMC Laboratory	-	-	-	○	-	R-4200	2017/12/14	12# Binwen Road, Hangzhou, Zhejiang, China	86-571-88317620
11016	Hangzhou TDT Technologies Co., Ltd	EMC Laboratory	-	-	-	-	-	C-4683	2017/12/14	12# Binwen Road, Hangzhou, Zhejiang, China	86-571-88317620
11017	Hangzhou TDT Technologies Co., Ltd	EMC Laboratory	-	-	-	-	-	T-2223	2017/12/14	12# Binwen Road, Hangzhou, Zhejiang, China	86-571-88317620
11018	Hangzhou TDT Technologies Co., Ltd	EMC Laboratory	-	-	-	-	-	G-832	2017/12/14	12# Binwen Road, Hangzhou, Zhejiang, China	86-571-88317620
11019	Wendell Industrial Co., Ltd.	W03	○	○	-	-	-	R-4201	2017/12/14	Land No. 0295-0006, Dakeng Small Section, Small Keelung Section, Sanzhi Dist, New Taipei City 252, Taiwan	886-2-2917-5770 Ext:318
11020	Wendell Industrial Co., Ltd.	W01 (Shielding Room)	-	-	-	-	-	C-4684	2017/12/14	6F, No 188, Baoqiao Road, Xindian District, New Taipei City, Taiwan	886-2-2917-5770 Ext:318
11021	Wendell Industrial Co., Ltd.	W01 (Shielding Room)	-	-	-	-	-	T-2224	2017/12/14	6F, No 188, Baoqiao Road, Xindian District, New Taipei City, Taiwan	886-2-2917-5770 Ext:318
11022	Wendell Industrial Co., Ltd.	W03	-	-	-	-	-	G-833	2017/12/14	Land No. 0295-0006, Dakeng Small Section, Small Keelung Section, Sanzhi Dist, New Taipei City 252, Taiwan	886-2-2917-5770 Ext:318
11024	KOSTEC Co., Ltd.	Shield Room	-	-	-	-	-	C-4685	2017/12/14	28 406-gil sejaro, Hwaseong-si Gyeonggi-do, Korea	82-31-222-4251

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11025	KOSTEC Co., Ltd.	Shield Room	-	-	-	-	-	T-2225	2017/12/14	28 406-gil sejaro, Hwaseong-si Gyeonggi-do, Korea	82-31-222-4251
11026	KOSTEC Co., Ltd.	Compact Chamber	-	-	-	-	-	G-834	2017/12/14	28 406-gil sejaro, Hwaseong-si Gyeonggi-do, Korea	82-31-222-4251
11068	Cerpass Technology Corporation	Cerpass Laboratory (Taoyuan)	-	-	-	○	○	R-4218	2018/1/18	No.10, Ln. 2, Lianfu St., Luzhu Township, Taoyuan County 33848 Taiwan	886-3-3226-888

Recommended reading for young engineers

Book title: PCB Currents: How They Flow, How They React (Prentice Hall Signal Integrity Library)

Authors: Douglas Brooks

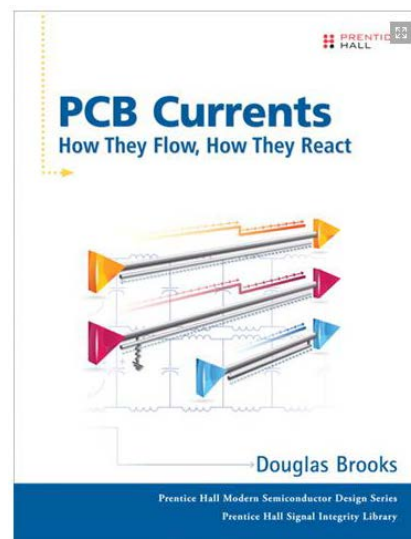
Publisher: Prentice Hall: 1st edition

No. of pages: 400 (hardcover)

Date of publishing: 2013/5/17

ISBN-10: 0133415333

ISBN-13: 978-0133415339



【Book review】

The author has long been engaged in the design of circuit boards. He is the person who developed UltraCAD, EDA tool for circuit board.

This book was published in the Signal Integrity Library series of Prentice Hall. It is handily written for beginners starting from ABC of electricity with two third spent on basic phenomena including Ohm's law and Kirchhoff's law. However, the author so scrupulously explains how those basic things are applied in Signal Integrity and concrete design of circuit that even engineers engaged in EMC design can learn a lot from this publication. If anything coverage of reflection and crosstalk is a bit weak but key points are securely covered. If you read "Signal and Power Integrity – simplified – 2nd edition" by E. Bogatin you can grasp the whole picture of the design of high speed circuit. One regrettable shortcoming is that physical quantity is all expressed in yard-pound system, so for us on SI unit system conversion work is needed.

This book is the first book written in English I bought as electronic book. It is very convenient as there are a lot of inks to dictionary and associated articles. I hope electronic books will widely be available in electronic format so it will lower the barrier of English book reading.

Before putting down a pen

With the new year holidays put behind I get the feel of coming of entrance examination season with the skin in reading newspapers and watching television. This year above all it is not somebody's sentiment but mine because my 6th grader daughter is going to take entrance examination shortly. In our kids days it is common for all to go public middle junior schools. So I have never thought my daughter would ever attend an after-hours cram school and challenge entrance examination for junior high school while she was a third grader. When she became a fourth grader she strongly appealed to attend a cram school, which I approved. Her reason was simple. It was not that she wanted to study harder but she just wanted to do the same thing her peers in the school are doing. Attending a cram school will have you realize how hard the entrance examination of Junior high school is. Above all the hardness of the study of my daughter in her 6th grade was abnormal. In the morning she studies from 5:30 to breakfast and in the evening from time she got back from the cram school till 11 O'clock or so. I can never beat her in knowledge of social studies and language. But her level in arithmetic and science leaves much to be desired. She is not good at such problems as "the crane-turtle calculation" and "tabibitozan" because she applies formulae without understanding their principle. I

question the teaching method at the cram school not to pay more attention to the principle of things. I very much appreciate the efforts of my wife. Almost half of the time of our daughter studies she oversees her without interruption although she is a full time working woman. It is a welcome byproduct that my wife is getting smarter and smarter while my daughter stagnates. Come February 1, entrance examination starts for junior high school kids. Whether or not my daughter can pass the examination is subtle, but she will have to keep crossing hurdles until she is admitted in a university. Right now the Ministry of Education, Culture, Sports, Science and Technology is reforming the system of university entrance. Resulted drastic changes will be applied at the time when 6th graders today will become the age to take university entrance examinations. It is said examination will include short dissertation, group discussion and presentations among others. The purpose of the reform is said to be the change from knowledge cramming to knowledge application which requires total capability of students including thinking power and judging power. It is my pleasure and curiosity to see how kids on the today's education system based on cramming can glow and cope with new system of university entrance examination. (R.M.)

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