

**TRAINING ON ELECTROMAGNETIC COMPATIBILITY**

24-28 June, Campinas, Brazil

Evaluation Results

1. Background

The International Telecommunication Union (ITU) with the collaboration of the Research and Development Centre (Centro de Pesquisa e Desenvolvimento - CPqD) based in Campinas, organized and delivered a Training Course on Conformance and Interoperability Testing in the premises of CPqD Labs, 24-28 June 2013.

The course programme focused on Electromagnetic Compatibility (EMC), theoretical and practical aspects, including laboratory experience and Accreditation procedures according ISO/IEC 17025. Eleven (11) participants from nine (9) countries of the Americas region attended the course. The following countries were represented in the training: Brazil, Cuba, El Salvador, Honduras, Jamaica, Panama, Paraguay, Uruguay and Venezuela.

2. Evaluation

2.1 ITU requested all participants to evaluate the training delivered and this brief Report presents the results of this evaluation. The evaluation form prepared by ITU is attached to this Report, as well as the forms filled by the participants. The first Section of the form is presented below with the rating provided by the participants.

Your appreciation (decreasing from 6-excellent to 1-poor)	
Issues	
ITU administrative procedures prior to the training	10 participants rated 6 and 1 rated 5
Technical level of the training	
Professional level and academic ability of Instructor	
Methodology used for knowledge transfer	
Quality of instructional material provided	
Level of interaction: a) among participants	10 participants rated 6 and 1 rated 4
b) participants/Instructor	10 participants rated 6 and 1 rated 5
Achievement of goals established for the training	10 participants rated 6 and 1 rated 4
Activities carried out in EMC Labs (workshop)	10 participants rated 6 and 1 rated 5
Logistics provided by CPqD (lunch, transp., coffee breaks)	11 participants rated 6
Accessibility/mobility within CPqD premises	
Infrastructure of CPqD	

2.2 Participants were invited to indicate positive and negative issues related to the training delivered. The table below presents all comments submitted by the participants.

Positive and Negative Comments	
+	-
<ul style="list-style-type: none"> ➤ Time labs were done well; ➤ Excellent organization for the training development; ➤ The attention from the instructor was magnificent, demonstrating great experience on the topic; ➤ Excellent support from ITU and very important the promotion of the information of the ITU C&I Project, as well as the interaction of participants for experiences and information sharing; ➤ CPqD was an opportunity for the development of our abilities in telecommunications; ➤ The theme of the training is a priority to be implemented in Panama; 	<ul style="list-style-type: none"> ➤ Training time should be extended; ➤ Languages differences; ➤ It would be useful to learn much earlier about training opportunities in order to allow countries to comply with internal procedures to participate; ➤ Itinerary procedures and the time was too short;



- 2.3 Participants were also invited to rank their priority needs among several topics and they were allowed to check as many topics as they wished in each of the priority options. The numbers you see below are the number of participants that have checked that topic in that specific priority option.

Next Conformance and Interoperability training of your interest								
Priority	Broadband	Electrical Protection	Interoperability	Mobile and wireless network	Next-Generation Network-NGN	Optical networks	Safety	Virtual lab
1 st	4	2	4	7	3	2	3	1
2 nd	3	1	0	0	5	1	0	2
3 rd	2	2	1	0	1	1	0	3
4 th	1	0	1	2	0	2	0	1

- 2.4 The last section of the form requested participants to list other training needs of their country/institution. The table below presents all suggestions submitted by the participants.

For ITU Guidance, please indicate other training needs of your country/institution
<ul style="list-style-type: none"> ➤ Broadband and Next Generation Network Development. ➤ IP Networks (IPV6), DWDM, Caching, CPA-IP. ➤ Capacity building on Digital TV. ➤ Monitoring and measuring of the different variables of the telecommunication services. ➤ Measuring of the radioelectric spectrum. ➤ Radioelectric spectrum monitoring stations. ➤ Digital TV (Labs). ➤ Digital TV. ➤ Spectrum Management. ➤ Training on broadband; Digital TV; training on 4G; Spectrum Management.
THANK YOU

3. Scrutiny and comments

3.1 Related to first Section of the Evaluation Form

- a. This Section of the Evaluation form clearly shows that just one participant did not rate the course at the maximum rate possible. The lower rates were given by the participant of Jamaica, who of course faced some difficulties in terms of interacting with other participants;
- b. The Instructor and laboratory assistances were very cautious in ensuring that the Jamaican participant received all the technical content of the training but despite of all his effort it was quite impossible to involve him in all discussions due to the fact that he was the only English speaking participant.

3.2 Related to the second Section of the Evaluation Form

- a. Most of the comments regarding the training were positive. Again we can see that the Jamaican participant made a negative comment highlighting language difficulties;
- b. There was just one comment on the length of the training suggesting that it could be longer;
- c. It was not possible to understand the last comment, since the participant who made it was not an ITU fellow. Regarding the "short period" mentioned by this participant, ITU could not clearly identify if it was in relation to the length of the course, for his internal procedures to leave his country or awareness of the capacity events for the region in due time. ITU continuously promotes the agenda of all events for AMS through the different means, including the C&I Portal for this specific training.



3.3 Related to the third Section of the Evaluation Form

The table below shows the ranking of priorities considering the contributions received from the participants.

Priority	Next C&I Training proposed	
1 st	Mobile and Wireless Network	
2 nd	Next-Generation Network-NGN	
3 rd	Broadband	Virtual Lab
4 th	Electrical Protection	Optical Networks

3.4 Related to the fourth and last Section of the Evaluation Form

The Americas region intends to use the contribution from participants in the planning of future trainings activities to be delivered by ITU through BDT's Operational Plan and/or through ITU Academy and the Centre of Excellence of the Americas region.

4. Conclusions

- 4.1 The difficulties encountered by the only English-speaking participant cannot be ignored and this will be taken into consideration during the planning of other training activities;
- 4.2 It is recommended that future trainings in the region be delivered in both language, in two separate events, in English and Spanish, in different topics as to allow the participation of all countries in all training, ensuring that country's representative domain the language of the training;
- 4.3 Analyzing the degree of his evaluation in the first Section of queries one can deduce that knowledge transference was not a major problem, but mainly his interaction during the training;
- 4.4 The table presented under paragraph 2.3 above clearly shows the priority needs indicated by the participants;
- 4.5 The interactive sessions showed C&I infrastructure needs of the participant countries, as creation of accredited laboratories and combat against counterfeit products. Many participants expressed interest in conducting Assessment Studies at sub-regional level and mutual cooperation through MRAs.
- 4.6 All participants were very positive in analyzing CPqD. ITU shall take them into consideration in future training opportunities. Nonetheless, ITU will keep tracking new partners to deliver trainings within the Region to promote diversity and regional integration;
- 4.7 From the rates given by the participants in the first Section of the Evaluation Form and also considering the positive and negative issues indicated one deduce with assurance that the training achieved the goals established and was successful.
- 4.8 Follow ups to this training will consist on the establishment of mail-list and chat on the C&I Portal (ITU Academy) to promote C&I activities and receive future inputs from the participants.
- 4.9 All the training content, including the participants presentations about conformance assessment in their countries, are available at:
<http://academy.itu.int/moodle/course/view.php?id=617>