

1st IEEE-CIGRE Expert Round Table on On-line Condition Monitoring

Summary

IEEE Substations Committee - CIGRE SC B3 Joint Meeting 2011, May 15-19 Chicago

1st IEEE-CIGRE Expert Round Table on On-line Condition Monitoring Monday, May 16th from 3:15pm – 5:00pm

1. Chair and main presentations

- Round table chair: Dr. N. L. Fantana, CIGRE
- Main presentation IEEE, co-chair C. Preuss IEEE, chair PES SC C0
- Main presentation CIGRE, from the work of WG B3-12: A.J. Mackrell, CIGRE, convener B3-12

2. Goal and Motivation

In recent years there has been an increase in the availability of condition monitoring devices and systems, as stand-alone equipment, or integrated with protection and control devices and systems. The use of such systems will depend on a lot of factors including expected value or benefit for the utility, asset-, risk- and network management policies and may vary from one utility to another.

What is the present experience, the value from on-line condition monitoring and what are the chances and challenges for the near future in the view of future smart grids?

The intention of the round table / podium discussion is to bring together experts from IEEE and CIGRE organizations, from utility and manufacturers and all interested to share their experience and best practices, to look together to future developments, chances and challenges.

3. Main focus of round table

The area of condition monitoring on-line and off line is very broad and difficult or impossible to deal with, and discuss experience in a short time. To narrow somewhat the topic two main areas to focus on in the presentations and discussions have been proposed as follows:

1. What is the present experience, the value obtained from on-line condition monitoring?
2. What are the chances and challenges for the near future in the view of future smart grids and substations

Agenda

- 1. Welcome, Introduction and key questions**
Nicolaie L. Fantana, secretary CIGRE WG B3-12 **10"**
Dr., Sen. IEEE, ABB, Germany

- 2. CIGRE view on obtaining value from on-line condition monitoring.**
Arthur J. Mackrell - convener CIGRE WG B3-12 **20"**
CEng BSc DMS Sen. IEEE MIET, UK,

- 3. IEEE Substation Committee and utility view on condition monitoring in substations - data, cases, value and future** **20"**
Craig Preuss – chair IEEE SCC0, Black & Veatch, USA
Dr. Tao Xia – Dominion, USA

- 4. Discussions and contributions OLCM topics** **35"**
2-3 slides, 3-4 min, focus on 2 key questions
Participants and submitted input

- 5. Concluding round and feedback from participants** **15"**
"one-take-away", "one-to-do", "one-to-think-at"

- 6. Concluding remarks, hands-out , short survey** **5"**
Dr. Nicolaie L. Fantana

- 7. END - with a picture - ALL participants**

5. Participation

- 23 attendants, equally split between IEEE and CIGRE
- 8 contributors which could not attend. Mainly utility persons (4 IEEE and 4 CIGRE; countries USA, CA, UK, CZ)



Participants at the "1st IEEE-CIGRE Expert Round Table on On-line Condition Monitoring" held May 16th 2011 in Chicago, during the joint meeting IEEE Substations Committee - CIGRE SC B3 substations.

Contributions

- 4 main presentations
- Short contributions from the floor, 7 short contributions/slides
- Submitted short contributions for the discussion, presented on behalf by AJM and NF

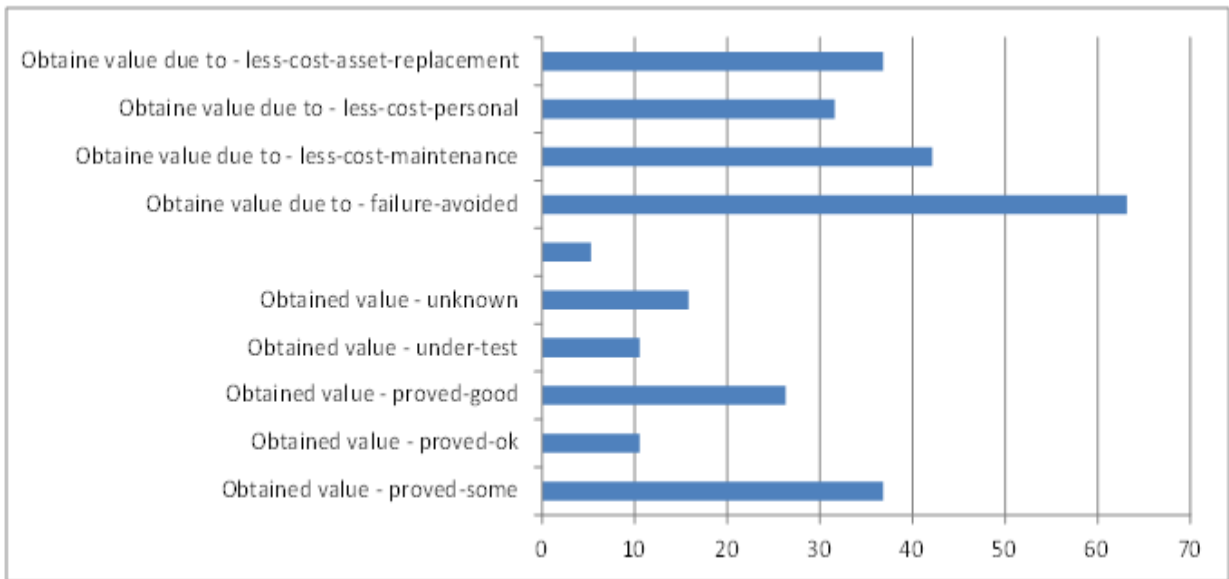
Short survey among experts

One page short survey was handed to the participants by round table chair. The goal was to get spontaneous and guiding responses to position better OLCM in the view of the participants.

19 responses to the short questionnaire have been received

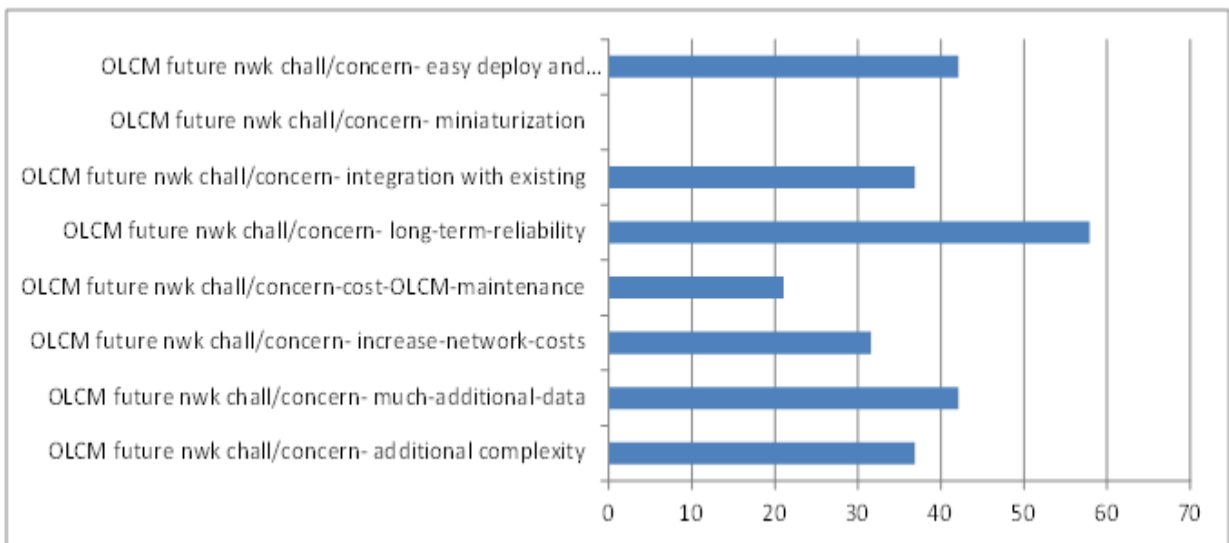
The following pictures highlight the responses for areas value and future network and OLCM:

- On-line condition monitoring and obtained value - in the view of present experts which responded round table small survey



OLCM and value

- Future expected challenges and concerns due to OLCM - in the view of present experts which responded round table small survey



OLCM an future network challenges or concerns

The final question was on "**Expert round table condition monitoring initiative-continue-yes, no , don't know**". With one exception which was don't know, and also in the discussions after the meeting the participants responded yes, or asked to continue round table condition monitoring initiative!

- **Hands-out for the participants**

The hands out prepared by round table chair contained: an overview and agenda, details on the CIGRE Technical Brochure 462 "Obtaining value form on-line condition monitoring" such as table of contents,

the executive summary, excerpts 1-2 key slides, from the main presentations prepared for the round table by CIGRE and IEEE.

9. Closing remarks from Chair and input from Participants

- **The topic of the round table is important and developing as applications and technology.**
- **The topic is worthwhile to discuss and beneficial as a joint IEEE-CIGRE round table.**
- **In both IEEE and CIGRE exist similar interests, approaches and concerns**
- **Issues on balancing cost & risk and value aspects, have shown up repeatedly in the discussions and presentations**
- **Not all aspects could be addressed at the 1st joint round table 2011 in more details e.g. related to data, new technologies, and future oriented approaches or emerging activities.**
- **The contributions revealed the interest in utilities and at manufacturers for OLCM and CM, projects ongoing and strategic plans towards condition monitoring**
- **On-line condition monitoring is an important and long term topic of common interest with expected future dynamics.**
- **It is enriching for all participants to have multiple views from IEEE and CIGRE.**
- **Also a joint round table enables direct contacts and discussions in a round of experts and discuss about the same topic**
- **Focused discussion proved to be of advantage. Possibly in the future to limit discussions to typically 2 major topics.**
- **Too short time slot provided - there is the need for more space for discussion**

10. Overall Conclusion and Proposal.

- **Round table was well received and attended**
- **Proposal based on participant's feedback and direct requests obtained after round table:**

Continue idea and initiative of joint round table IEEE-CIGRE in 2012 and organize the **"2nd IEEE-CIGRE Expert Round Table on On-line Condition Monitoring"**, May-2012, in Raleigh NC, during the IEEE Substation committee meeting.
- Dr. N. Fantana, ABB has volunteered to continue and organize the 2012 round table. As a senior member of IEEE, and member CIGRE and can help bridge IEEE and CIGRE activities.
- The 2012, 2nd IEEE-CIGRE Expert Round Table, needs to provide:
 - A longer duration for the round table e.g. 2h:30 min instead of 1h:45
 - Announce and disseminate information on round table in both IEEE and CIGRE well in advance

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