

IEC-RE DRAFT OD

To: SG551

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General Process of Performing Proficiency Tests (PTs) for IEC-RE

1 General remarks

This OD describes the general approach to perform PTs for IEC-RE TLs.

Competence area (CA) specific ODs need to be phrased additionally, especially if more hardware related issues need to be addressed (as in anemometer calibration or when measurements shall be included).

In its current states, this OD assumes that the PT consists mainly on analyzing data sets.

It is a result of experiences made at several TLs with PTs and deviates significantly from earlier approaches, that did not include a clarification phase (s.b.) nor a publishing phase (s.b.).

Another interesting difference is the concept, that one of the participating TLs conducts the PT. In order to minimize the advantage of that TL, the organizer plays an important role when dealing with the incoming results of all participants (s.b.). From experiences made with IEC-RE Pts, the resulting advantage is quite minor (and usually overestimated) to the huge gain for the overall process, but especially for the discussions during clarification phase, that is achieved by having an expert conductor right out of the middle of the peers who is actively involved in the tested service at that time with the effective norms at that time.

MEASNET has offered to play a role as one possible independent organizer.

In order to propose any resulting clarification sheets please refer to the respective OD and / ROP section.

2 Goals of PTs

- Clarify interpretation of respective norm / guideline
 - Assess qualification of test labs (TLs) / OEMs
 - Publish results to the industry
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3 Actors

- Organizer:
 - Independent organization
 - starts PT
 - publishes pass / non pass criteria (Input from Group + Conductor after Phase 1)
 - decides on conducting TL
 - provides data server
 - organizes finances
 - publishes pass / non pass results in coordination with the conductor
 - publishes results, including pass certificates. Access is guaranteed for 10 years
 - gets 20% of participation fees
 - Conducting TL:
 - one of the participating TLMs
 - provides data sets
 - analyzes results
 - leads clarification discussions
 - gets 80% of participation fees
 - must be present in person on all IEC-RE SG551 meetings during the PT Phase
 - would be welcomed to be present on other expert group meetings during the PT Phase
 - Participants:
 - TLMs
 - OEMs can participate from phase 2 on
 - Participants have to be able to inject testdata in ASCII Format ("." is decimal point, 6 digits after decimal point) into their data evaluation process at different stages.
 - Participants will provide all results with 6 digits after decimal point.
 - All test data and results will be in SI units
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4 Proposed Procedure

Setup

- PTs should be held all 1.5 years
 - Organizer announces planned execution of a PT 4 month ahead, including the participation fee (e.g. PT loads fee: 1000 € to 2000 € per participant)
 - Organizer publishes which guidelines + existing clarification sheets will have to be used
 - Interested TLs + OEMs register with organizer as participants
 - Interested TLs + OEMs have to agreed to this OD.
 - Organizer checks if a participant can be accepted and clarifies participant status (TL / OEM)
 - Participants pay PT fee to Organizer. If the participant steps out later, the fee will not be re-funded.
 - Registering phase ends 2 month before start of PT. All TLs and OEM become participants who have registered and payed before this date.
 - Organizer asks TLs who would be willing to be conductor of this PT.
 - Potential conductor TLs have to meet the following requirements:
 - Conducting TL must be accredited according to ISO 17025 or already be an accepted IEC-RE TL
 - Conducting TL must proof well founded know how and experience with the PTs competence area for at least 5 years
 - Conducting TL has to have passed the respective PT at least once in the past
 - Conducting TL has well founded know how of conducting PTs
 - Conducting TL has to agree to the IEC PT OD procedure
 - Conducting TL has to work according to (*to be discussed*)
 - ISO/IEC 17043 Conformity assessment: General requirements for proficiency testing
 - ISO 13528 Statistical methods for proficiency testing by inter laboratory comparisons
 - Conducting TL must have participated in a basic PT training (by MEASNET, IEC,...)
 - Organizer decides on which TL which become conducting TL
 - From this point on, the conducting TL takes over all organization and communication.
 - Conducting TL creates a time line with binding dates
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Phase 1

- Conducting TL states which (informative) annexes must be used during the PT
 - Conducting TL creates first set of test data and loads it to the organizers data server. Test data sets must consist of 3 parts:
 - part 1 data is artificial data, where results can be mathematically calculated
 - part 2 data is optimized to raise specific problems that have been discussed in past PT's clarification sheets or address specific features of the norms / guidelines
 - part 3 data is from real live measurements, anonymized
 - Data for checking single issues should be independent from other data in order to not move deviations up the chain
 - Conducting TL creates result template and loads it to the organizers data server
 - Participants download data, produce first analysis and submit those by using the result template
 - Organizer opens access to uploaded results to the conducting TL only when all participants (including conducting TL) have uploaded their results
 - Conducting TL produces evaluation of phase 1 and uploads it to the organizers data server
 - Conducting TL organizes meetings / telcos to discuss results + deviations
 - Conducting TL discusses questions / issues with responsible persons from norming committees
 - Conducting TL phrases clarification sheets, based on experiences in phase 1, submits them to the organizer
 - Organizer submits clarification sheets to respective recipients (MEASNET, TC88, IEC-RE, FGW, ...)
 - Conducting TL + group + organizer decide on pass / non pass criteria based on experiences in phase 1 for phase 2
 - Organizer publishes pass / non pass criteria
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Phase 2

- Conducting TL states which options in the norms / guidelines (if there are options) shall be used
- In phase 2 informative annexes do not need to be used
- Conducting TL creates second set of test data and loads it to the organizers data server. This set must be different in values and must address any new clarification sheet issues in phase 1.
- Conducting TL creates result template and loads it to the organizers data server
- Participants download data, produce first analysis and submit those by using the result template
- Organizer opens access to uploaded results to the conducting TL only when all participants (including conducting TL) have uploaded their results
- Conducting TL produces evaluation of phase 2 and uploads it to the organizers data server
- Conductor and organizer decide on pass / no pass and upload the result documents to the organizers data server

Phase 3

- Organizer publishes results:
 - List of participants + status + pass / no pass
 - Mean / deviation / min / max of all results of all participants
 - Mean / deviation / min / max of all results of all participants who passed
 - norms / guidelines, old clarification sheets, new clarification sheets
 - pass documents
 - Participants that drew back with an explanation before the first data submission, will not be on the published lists of participants
 - Participants that did not submit any data without explanation in phase 1 or phase 2, will be listed as participant and non pass
 - Participants that step out after the first data submission, will be listed as participant and non pass
 - Organizer sends documents with pass result to all passing participants
 - Organizer stores all data for further investigations, min. 10 years
 - Organizer pays fee share to conducting TL
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5 Specific changes to the general procedure for the competence area Anemometer Calibration

- None so far

6 Specific changes to the general procedure for the competence area Blade Testing

- None so far

7 Specific changes to the general procedure for the competence area Loads Testing

- None so far

8 Specific changes to the general procedure for the competence area Power Performance Testing

- None so far
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