



Sherry
Hampton/STDS/STAFF/
US/IEEE

10/02/2007 10:40 PM

To am.sahazizian@hydroone.com

cc rsnowell@southernco.com, stds-pes-scc@ieee.org,
preusscm@bv.com, Matthew
Ceglia/STDS/STAFF/US/IEEE@IEEE

bcc

Subject Approval of Project - PC37.1

02 October 2007

Anne-Marie Sahazizian
Hydro One Inc.
483 Bay St. (TCT13)
Toronto, Ontario M5G 2P5
am.sahazizian@hydroone.com

Re: PC37.1 - Standard for SCADA and Automation Systems

Dear Anne-Marie:

I am pleased to inform you that on 27 September 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2007. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/C37-1.pdf>. Please note that the PAR submission deadline is 15 October 2007 if you would like to submit a PAR extension request.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

Rosters can be submitted in any format to the NesCom Administrator (nescom-admin@ieee.org). Please forward this list to the NesCom Administrator via e-mail at nescom-admin@ieee.org no later than 26 December 2007.

Or, for your convenience, you can manage your standards development roster in myProject. Instructions are as follows:

- Go to myProject - <https://development.standards.ieee.org/my-site>
- Login using your IEEE Web Account username and password.
- Once logged into myProject, go to "Manage Committees"
- Drill down to the project by clicking the (+) on the left to expand each level. The actual project will be highlighted in yellow
- Click "Manage Committees" for that project. A list of individuals enrolled in the

Committee/Project will appear. On this screen you can assign whether a person is a Participant, a Non-Voting Member or a Voting Member of the project group. You may also view contact information for that individual.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any questions, please contact the NesCom Administrator via e-mail at nescom-admin@ieee.org or via telephone at +1 732 562 3806.

Sincerely,

NesCom Admin
Standards Activities
Email: nescom-admin@ieee.org

PAR Request Date: 11 July 2007

PAR Approval Date: 27 September 2007

PAR Signature Page on File: Yes

Type of PAR: Modification to Approved PAR

Status: Modification to a Previously Approved PAR for the Revision of a Standard - PC37.1, 26 June 1999

Root Project: IEEE Std C37.1-1994

1.1 Project No.: **C37.1**

1.2 Type of Document: Standard

1.3 Life Cycle: Full-Use

1.4 Is this document in ballot now? No

2.1 Title

Standard for SCADA and Automation Systems

3.1 Working Group Name

[C3 Working group](#)

Working Group Chair

[Preuss, Craig](#)

Phone: 913-458-7781

Email: preusscm@bv.com

Working Group Vice Chair

3.2 Sponsor

[IEEE Power Engineering Society Substations \(PE/SUB\)](#)

Sponsor Chair

[Nowell, Robert S](#)

Phone: 404 506 2735

Email: rsnowell@southernco.com

Name of Standards Liaison Representative (if applicable)

[Sahazizian, Anne-Marie](#)

Phone: 416-345-6657

Email: am.sahazizian@hydroone.com

3.3 Joint Sponsor

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: April 2007

4.3 Projected Completion Date for Submittal to RevCom: October 2007

5.1 Approximate number of people expected to work on this project: 20

5.2 Scope: This standard applies to, and provides the basis for, the definition, specification, performance analysis, and application of SCADA and automation systems in electric substations, including those associated with generating stations and power utilization and conversion facilities.

Old Scope: The present standard does not cover SCADA applications using microprocessor based protection and monitoring (IEDs), nor does it cover substation automation systems. Both will be added in this revision. The intended users are electric utility engineers specifying such systems, vendors, and consultants.

5.3 Is the completion of this document contingent upon the completion of another document? No

5.4 Purpose: The purpose of this standard is to provide guidance to the engineer responsible for the design and specification of SCADA and automation systems.

Old Purpose: The present title of C37.1 is "Definition, Specification, and Analysis of Systems Used for Supervisory Control, Data Acquisition, and Control". Since the standard was last updated in 1994, substantial changes in technology have taken place. The proposal is to update the standard, incorporating the new technology, and with a new title "Standard for SCADA and Automation Systems." The automation systems to be covered are in electric substations.

5.5 Need for the Project: The present title of C37.1 is "Definition, Specification, and Analysis of Systems Used for Supervisory Control, Data Acquisition, and Control". Since the standard was last updated in 1994, substantial changes in technology have taken place. The proposal is to update the standard, incorporating the new technology, and with a new title "Standard for SCADA and Automation Systems." The automation systems to be covered are in electric substations.

5.6 Stakeholders for the Standard: Utilities

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes Presented Date: 2007-04-10

If no, please explain:

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No

If yes, please explain:

6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

If yes, please explain:

7.1 Are there other standards or projects with a similar scope? No

If yes, please explain:

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? No

Technical Committee Name and Number:

Contact person:

Contact person Phone Number:

Contact person Email Address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

7.4 Additional Explanatory Notes:

The original PAR was submitted years ago. During final review of the draft, I noticed that the original PAR was not suitable for publication. I updated the scope and purpose and IEEE staff informed me that the PAR would have to be updated.

8.1 Sponsor Information:

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

[Email This Letter](#)

06 December 2006

Anne-Marie Sahazizian
Hydro One Inc.
483 Bay St. (TCT13)
Toronto, Ontario M5G 2P5
AM.Sahazizian@HydroOne.com

Re: PC37.1 - Standard for SCADA and Automation Systems

Dear Anne-Marie:

I am pleased to report that on 06 December 2006 the IEEE-SA Standards Board approved the extension request of the above-referenced project until 31 December 2007.

If you should have any further questions, please contact me at +1 732 562 6003 or by email at s.hampton@ieee.org.

Sincerely,

Sherry Hampton
Administrator, Governance
Standards Activities
Phone +1 732 562 6003
FAX +1 732 875 0695
Email: s.hampton@ieee.org

CC: HannaEssa.Abdallah@aps.com, stds-pes-scc@ieee.org

IEEE-SA Standards Board Extension Request
Revised 23 June 2004

1. *Date of Request: 19-Sep-06*
2. *Assigned Project Number: P37.1*
3. *Project Title: Standard for SCADA and Automation Systems*
 - a. *Name of Working Group (WG): C3*
 - b. *Name of Working Group Chair: Craig Preuss*
 - c. *Name of Sponsoring Society and Committee: PES Substation Committee*
 - d. *Name of Sponsoring Committee Chair: Hanna Abdallah*
4. *Contact Information (Contact should be the person who will answer any questions concerning this extension request):*
 - a. *Name: Craig Preuss*
 - b. *Telephone: 913-458-7781*
 - c. *FAX: 913-458-7677*
 - d. *EMAIL: preusscm@bv.com*
5. *Statement of why an extension is required. This should include a description of what the working group has accomplished and what remains to be accomplished, along with the reasons why the work was unable to be completed in the allotted timeframe This effort is a radical rework of this standard. This was required because of major technology changes in the area of substation control and monitoring. The existing standard is based on a traditional RTU model, where as the revision covers automation/integration technology made possible with the availability of the microprocessor based IEDs. As a result of breaking so much new ground, we have had difficulty in defining and maintaing the scope of this work. This has resulted in numerous major changes to the outline of work through the years.*

This work is currently being done under Working Group C3. C3 was an umbrella group that was catching all the standards under C0 that required updating. We have changed that model so that now C3 will have C37.1 as its only task. Craig Preuss has volunteered to be the chair. We feel this reorganization will give us more specific leadership/ownership and clear visibility from those outside the organization. Since Craig has taken over as chair earlier this year, there has been a clear direction and no major changes. Both of which should result in getting this effort completed without further delay. In addition, over the years we have seen some major scope creep with the development of this standard. We have made some decisions that will expedite the completion without affecting what we originally had intended. These changes have been incorporated into draft 10. In addition, we plan to use more non-traditional methods to get this effort commpleted including web conference meetings.

6. *History*
 - a. *What date was the PAR first approved? 26-Jun-99*
 - b. *What date did you begin writing the first draft? 27-Apr-00*

- c. How many people are actively working on the project? 10
d. How many times a year does the working group meet:
1. In person? 3
2. Via teleconference? 0
e. How many times a year is a draft circulated to the working group via electronic means? 3

7. Document Progress

- a. What percentage of the Draft is stable? 80%
b. How many significant work revisions has the Draft been through? 10

8. Project Plan

(Item #8a is only for projects that have been balloted. If your draft has not yet gone to ballot, please go to Item #8b)

- a. Balloting History - Provide history of all IEEE Sponsor ballots under this project.:

1st Ballot Close date (or scheduled close):

1st Ballot Draft Number:

1st Ballot results (% affirmative, %negative, %abstain):

2nd Ballot Close date (or scheduled close):

2nd Ballot Draft Number:

2nd Ballot results (% affirmative, %negative, %abstain):

(Add additional entries for ballots as needed):

When do you estimate that the final IEEE Sponsor ballot will be completed?

When do you expect to submit the proposed standard to RevCom?

- b. For projects that have not yet begun Sponsor ballot, please answer the following:**

When will IEEE sponsor balloting begin? 1-Aug-07

When do you estimate that the final IEEE Sponsor ballot will be completed? 1-Nov-07

When do you expect to submit the proposed standard to RevCom? 1-Sep-08

9. Future Adoptions

- *If this is a new document, will it be adopted (in part or in whole) by another national, regional or international organization? No If yes, which organization?*
- *If this is a revision of an existing document, has this document been adopted by the IEC, ISO, ETSI, SCC, etc? No If yes, which organization?*

10. Additional Extensions

a. *Is this the first request for an extension? No (If yes, please do not go any further. You have completed the form.)*

b. *If not, when was the previous extension approved?*

After completion of this form, please e-mail this to the NesCom Administrator at nescom-admin@ieee.org. Confirmation of submittal will be sent on receipt of this request.

[Email This Letter](#)

12 September 2003

Anne-Marie Sahazizian
Hydro One Inc.
483 Bay St. (TCT07)
Toronto, Ontario M5G 2P5
CANADA
anne-marie.sahazizian@HydroOne.com

Re: PC37.1 - Standard for SCADA and Automation Systems

Dear Anne-Marie:

I am pleased to report that on 11 September 2003 the IEEE-SA Standards Board approved the extension request of the above-referenced project until 31 December 2006.

If you should have any further questions, please contact me at 732-562-6367 or by email at j.haasz@ieee.org.

Sincerely,

Jodi Haasz
Program Manager
International Stds Programs and Governance
Standards Activities
Phone +1 732 562 6367
FAX +1 208 460 5300
Email: j.haasz@ieee.org

cc: j.t.tengdin@ieee.org, sakis.meliopoulos@ece.gatech.edu, stds-pes-scc@ieee.org

IEEE-SA Standards Board Extension Request

Revised 6 December 2000

1. Date of Request: 3-Jun-30
2. Assigned Project Number: PC37.1
3. Project Title: Standard for SCADA and Automation Systems
 - a. Name of Working Group(WG): C3
 - b. Name of Working Group Chair: John T. Tengdin
 - c. Name of Sponsoring Society and Committee: PES Substations
 - d. Name of Sponsoring Committee Chair: Sakis Meliopoulos
4. Contact Information (Contact should be the person who will answer any questions concerning this extension request):
 - a. Name: John T. Tengdin
 - b. Telephone: 949-361-9595
 - c. FAX: 949-361-9595
 - d. EMAIL: j.t.tengdin@ieee.org
5. Statement of why an extension is required. If this is a request for an additional extension, please state why you believe that this extension request will be your final request, and the reason for this additional extension. Although the Working Group has met twice year to date, progress has been slow. The working group plans to meet at the PES General Meeting in Toronto, but total attendance now is projected to be low due to the concern over SARS. The Working Group also plans to meet during the joint meeting with PSRC in September. However, we expect it will take an additional three years to complete the document and its balloting
6. History
 - a. When was the PAR first approved? 26-Jun-99
 - b. When did you begin writing the first draft? 27-Apr-00
 - c. How many people are actively working on the project? 10
 - d. How many times a year does the working group meet in person? 4
 - e. How frequently is a draft version circulated to the working group via electronic means? twice a year
7. Document Progress
 - a. How much of the Draft is stable? 40%
 - b. How many significant work revisions has the Draft been through? 4
 - c. Briefly describe what the development group has already accomplished, and what remains to be done. The document has been totally restructured in response to its broadened scope, but all clauses are not yet complete.
8. Project Plan
 - a. When did/will IEEE sponsor balloting begin? 1-Oct-04

- b. When do you estimate that the final IEEE Sponsor ballot will be completed? 1-Jun-05
- c. When do you expect to submit the proposed standard to RevCom? 1-Jul-06
- d. Do you see value in help or mentoring from the Standards Board staff to meet your projected schedule? If so, what kind of help would be useful? NO

9. Additional Extensions

- a. Is this the first request for an extension? Yes (If yes, please do not go any further. You have completed the form.)
- b. If not, when was the previous extension approved?
- c. How much additional time is needed to complete the project? 3 years

After completion of this form, please e-mail this to the NesCom Administrator at nescom-admin@ieee.org. Confirmation of submittal will be sent on receipt of this request.

From: "Engmann, Gary R." <engmanngr@bv.com>
To: "ieee kershner, rona" <r.kershner@ieee.org>
Cc: "tengdin, john" <jttengdin@aol.com>
Subject: PAR for revision of c37.1
Date: Sat, 27 Mar 1999 15:05:17 -0600
MIME-Version: 1.0

Rona, the following is the PAR for REVISION OF C37.1-1994. You should have received a FAX yesterday, with John Tengdin's signature on the Copyright Release form?? let me know if there are problems. gary



IEEE-SA Standards Board Project Authorization Request (PAR) (1999-Rev 1)

- 1. Sponsor Date of Request - 27 march 1999
- 2. Assigned Project Number PC37.1
- 3. PAR Approval DATE [June 26, 1999] {IEEE Staff to fill in box}
{Copyright release must be received with appropriate signatures by postal mail or FAX (1-732-562-1571)}
- PAR Signature Page Received {IEEE Staff to check Box}
- 4. Project Title and Working Group/Sponsor for this Project
Document type : {Place an X in only one option below}
[X] Standard for {Document stressing the verb "SHALL"}
[] Recommended Practice for {Document stressing the verb "SHOULD"}
[] Guide for {Documents in which good practices are suggested}

TITLE: Standard for SCADA and Automation Systems

Name of Working Group(WG) : C3 Electric Network Control System Standards

Name of Official Reporter (usually the WG Chair) who MUST be an SA member as well as an IEEE/Affiliate Member: John T. Tengdin

Title in WG: Chairman IEEE/SA/ # 3413499 {Required}
Company: OPUS Publishing Telephone: 949-361-9595
Address: 2859 Calle Heraldo FAX: 949-361-9595
City/State/Zip: San Clemente CA 92673 EMAIL: j.t.tengdin@ieee.org

Name of WG Chair (if different than Reporter): Same

IEEE/Affiliate Memb # [] {Required}
Company: [] Telephone: []
Address: [] FAX: []
City/State/Zip: [] EMAIL: []

Name of Sponsoring Society and Committee: PES Substations Committee

Name of Sponsoring Committee Chair: James C. Burke
Company: Baltimore Gas & Electric Co. Telephone: 410-281-3598
Address: 7152 Windsor Ave. FAX: 410-281-3600
City/State/Zip: Baltimore MD 21244-2779 EMAIL: james.c.burke@bge.com

5. Describe this Project by answering each of five questions below:

5a. Update an existing PAR? - No

5b. Choose one from the following:

b1 - New Standard

b2 - Revision of existing standard {number and year} C37.1-1994

b3 - Amendment (Supplement) to existing standard {number and year} []

b4 - Corrigenda to existing standard {number and year} []

5c. Choose one from the following:

c1 - Full Use (5-year life cycle)

c2 - Trial Use (2-year cycle)

5d. Choose one from the following:

d1 - Individual Sponsor Ballot Process

d2 - Entity (not Individual) Sponsor Ballot Process

5e. Fill in Target Completion Date to IEEE RevCom: 11/2001

6. Scope of Proposed Project

The present standard does not cover SCADA applications using microprocessor based protection and monitoring (IEDs), nor does it cover substation automation systems. Both will be added in this revision. The intended users are electric utility engineers specifying such systems, vendors, and consultants.

7. Purpose of Proposed Project:

The present title of C37.1 is "Definition, Specification, and Analysis of Systems Used for Supervisory Control, Data Acquisition, and Control". Since the standard was last updated in 1994, substantial changes in technology have taken place. The proposal is to update the standard, incorporating the new technology, and with a new title "Standard for SCADA and Automation Systems". The automation systems to be covered are in electric substations.

8. Intellectual Property { Answer each of the questions below }

8a. Are you aware of any patents relevant to this project?

[No]

8b. Are you aware of any copyrights relevant to this project?

[No]

8c. Are you aware of any trademarks relevant to this project?

[No]

8d. Are you aware of any registration of objects or numbers relevant to this project?

[No]

9. Are you aware of other standards or projects with a similar scope?

[No]

10. International Harmonization

Is this standard planned for adoption by another international organization?

[??] {?? if you don't know at this time }

11. Is this project intended to focus on health, safety or environmental issues?
[No]

12. Proposed Coordination/Recommended Method of Coordination

12a. Mandatory Coordination
SCC 10 (IEEE Dictionary) by DR
IEEE Staff Editorial Review by DR
SCC 14 (Quantities, Units and Letter symbols) by DR

12b. Coordination requested by Sponsor and Method:
PES Power System Relaying Committee by DR
PES Power System Communications Committee by DR
additional PES Technical Committee coordination(if any) will be added by
gary engmann

12c. Coordination Requested by Others:
[] {added by staff}

Additional Explanation Notes: {Item Number and Explanation}
[]{If necessary, these can be continued on additional pages}

PAR Copyright Release and Signature Page Dec-1998 V1

1. Sponsor Date of Request 26 March 1999

2. Assigned Project Number PC37.1
Title Standard for SCADA and Automation Systems

I hereby acknowledge my appointment as Official Reporter to the C3 Electric Network Control Systems Standards of the IEEE Power Engineering Society Substations Committee

In consideration of my appointment and the publication of the Standards Publication identifying me, at my option, as an Official Reporter, I agree to avoid knowingly incorporating in the Standards Publication any copyrighted or proprietary material of another without such other's consent and acknowledge that the Standards Publication shall constitute a "work made for hire" as defined by the Copyright Act, and, that as to any work defined, I agree to and do hereby transfer any right or interest I may have in the copyright to said Standards Publication to IEEE.

Signature of Official Reporter *John T. Tengdin* Date 26 March 1999
Name of Official Reporter: John T. Tengdin
Title in WG: Chairman IEEE/SA/Affiliate Memb # 3413499
Company: OPUS Publishing Telephone: 949-361-9595
Address: 2859 Calle Heraldo FAX: 949-361-9595 (same)
City/State/Zip: San Clemente CA 92673 EMAIL: j.t.tengdin@ieee.org

Submitted by:
Signature of Submitter _____ Date 26 March 1999
Name of Sponsor Committee Chair: Gary R. Engmann
Relationship to Sponsor: Standards Coordinator, IEEE PES Substations Committee
Company: Black & Veatch Telephone: 407-419-3521
Address: 201 S. Orange Ave, Suite 500 FAX: 407-419-3501
City/State/Zip: Orlando FL 32801 EMAIL: engmanngr@bv.com

The submitter will be notified in writing when the PAR is received and when the PAR will be considered for approval by the Standards Board. After the Standards Board meeting, the submitter and official reporter will be notified in writing of the action taken.

Do Not Write Below This Line

Signature by IEEE officer: *Phil Hollen* Date: 26 June 1999
Title: SASB Chair

To: engmanngr@bv.com
From: Jodi Haasz <j.haasz@ieee.org>
Subject: Approval of PC37.1
Cc: james.c.burke@bge.com, j.t.tengdin@ieee.org
Bcc:

X-Attachments:  C37-1.pdf  ballotin.pdf

June 28, 1999

Gary Engmann
Black & Veatch
201 S. Orange Avenue, Suite 500
Orlando, FL 32801

Re: PC37.1 Standard for SCADA and Automation Systems

Dear Mr. Engmann:

I am pleased to inform you that on 26 June 1999 the IEEE-SA Standards Board approved the above referenced project. A copy of the file is attached in .pdf format.

At the bottom of this e-mail, please find URLs and an attached .pdf file which you may find useful in the development of your proposed standard and in submitting your final draft for approval. Written responses from all committees/organizations listed on the PAR as proposed coordination must be included with the final draft when it is submitted.

If coordination is effected by common membership, i.e., a person on the standard's developing committee who is also a member of the committee/organization specified on the PAR for coordination, there must be a document included with the final draft from that coordinating body which states that person is authorized to represent it. We strongly recommend that a copy of your draft be sent to this office for review prior to the final voting by the working group to allow for a quick review by the editorial staff before sponsor balloting.

If you should have any further questions or would like to receive this information in paper, please contact me at 732-562-6367 or by email at j.haasz@ieee.org.

Sincerely,

Jodi Haasz
Administrator, Standards Process Support
NesCom Secretary

cc: J. Burke
J. Tengdin

PS - The informaton in .pdf files is viewable in Adobe Reader,

version 3.0 or higher. If you do not have this software, please go to

<http://www.adobe.com/prodindex/acrobat/readstep.html#reader> to download the free version.

IEEE Standards Style Manual

<http://standards.ieee.org/guides/style/index.html> - Guidelines that establish style and format requirements for the preparation of proposed IEEE standards.

IEEE Standards Companion

<http://standards.ieee.org/guides/companion/index.html> - An overall view of the standards process; what to do, what to avoid, lessons learned, and sample forms.

Implement Plan for Metric Policy 9.20

<http://standards.ieee.org/announcements/metric.html> - Information on when, why and how the plan will be implemented and what exceptions exist.

Leading a Standards Development Group

<http://standards.ieee.org/faqs/ltpres.html#q1> - A free training session offered by staff to make the most of the standards process. After attending, you will have a great understanding of:

- the need for due process and consensus
- how to submit PARs and Drafts
- the "legal" aspects (copyrights, trademarks, patents)
- how staff can help you

Standards Coordinating Committee 10

<http://standards.ieee.org/faqs/SCC10.html> - An explanation of the importance of coordinating with the IEEE Dictionary (SCC10) as is mandated on the PAR form.

Balloting Information (see attached PDF file)

- IEEE Standards Balloting Process Flowchart - An easy-to-read flowchart for an overall understanding of the balloting procedure.
- Invitation-To-Ballot Service - Let IEEE form your balloting group!!! Who to contact to take advantage of this service.
- Balloting Service - Once your balloting group is formed, IEEE will conduct the sponsor level ballot for your draft document. A complete list of what to submit, and who to send it to is included for easy reference.