

Supply Chain and Asset Traceability for the Electric Grid Industry Connections Activity Initiation Document (ICAID)

Version: 1.0, 24 August 2022

IC22-009-01 Approved by the CAG 12 October 2022

Instructions

- Instructions on how to fill out this form are shown in red. Please leave the instructions in the final document and simply add the requested information where indicated.
- Spell out each acronym the first time it is used. For example, "United Nations (UN)."
- Shaded Text indicates a placeholder that should be replaced with information specific to this ICAID, and the shading removed.
- Completed forms, in Word format, or any questions should be sent to the IEEE Standards Association (IEEE SA) Industry Connections Committee (ICCom) Administrator at the following address: industryconnections@ieee.org.
- The version number above, along with the date, may be used by the submitter to distinguish successive updates of this document. A separate, unique Industry Connections (IC) Activity Number will be assigned when the document is submitted to the ICCom Administrator.

1. Contact

Provide the name and contact information of the primary contact person for this IC activity. Affiliation is any entity that provides the person financial or other substantive support, for which the person may feel an obligation. If necessary, a second/alternate contact person's information may also be provided.

Name: Alicia Farag

Email Address: Alicia.farag@locusview.com

Employer: Locusview Solutions

Affiliation: Entity Name(s)

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

2. Participation and Voting Model

Specify whether this activity will be entity-based (participants are entities, which may have multiple representatives, one-entity-one-vote), or individual-based (participants represent themselves, one-person-one-vote).

Specify: Individual-Based

3. Purpose

3.1 Motivation and Goal

Briefly explain the context and motivation for starting this IC activity, and the overall purpose or goal to be accomplished.

The motivation for this IC activity is the increased focus on supply chain and asset traceability for electric grid components.

- Grid operators have aggressive capital investment programs to harden existing assets, expand networks, and provide interconnects for renewables. Barcoded assets with industry standard traceability data will allow operators to efficiently collect and integrate high quality datasets for mapping and asset management systems.
- Grid operators have identified asset traceability as a barrier to efficient asset sharing during emergencies and mutual aid because they cannot verify the asset's attributes and system compatibility.
- Manufacturers are starting to apply barcodes to their products, but there are no industry standards to guide the structure and content of the data contained in the barcodes.
- The Department of Energy (DOE) has identified supply chain security and resiliency as a top priority including verification of country of origin for electric grid assets.
- Utilities are increasingly making commitments to environmental and social goals that include their supply chains.

Further, motivation is provided by success stories in other industries such as pharmaceuticals and food that have implemented barcode-based traceability solutions that have led to automated data exchange throughout the supply chain.

The purpose of this IC activity is to explore the development of industry standards for supply chain and asset traceability for critical electric grid assets, equipment, and materials. Potential tasks to be completed within this activity include:

- Defining critical assets that require supply chain and asset traceability
- Defining use cases and the value proposition of supply chain and asset traceability
- Conducting a proof of concept with manufacturers to test and validate the feasibility and value proposition of barcodes that link to asset traceability data

3.2 Related Work

Provide a brief comparison of this activity to existing, related efforts or standards of which you are aware (industry associations, consortia, standardization activities, etc.).

EPRI is considering an R&D project for transformer traceability

3.3 Previously Published Material

Provide a list of any known previously published material intended for inclusion in the proposed deliverables of this activity.

N/A

3.4 Potential Markets Served

Indicate the main beneficiaries of this work, and what the potential impact might be.

The beneficiaries and users of this work will include:

- Electric transmission and distribution companies will be able to scan product barcodes and retrieve supply chain and asset traceability data in a standardized format
- Manufacturers will be able to meet customer demands for increased product traceability by complying with industry standards instead of one-off requirements

3.5 How will the activity benefit the IEEE, society, or humanity?

Describe how this activity will benefit the IEEE, society, or humanity.

This activity may lead to the development of IEEE standards for supply chain and asset traceability. It will increase the efficiency and accuracy of data shared throughout the supply chain. It will help DOE and operators ensure goals for electric grid security and resiliency are met.

4. Estimated Timeframe

Indicate approximately how long you expect this activity to operate to achieve its proposed results (e.g., time to completion of all deliverables).

Expected Completion Date: 09/2024

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICCom and the responsible committee of the IEEE SA Board of Governors. Should an extension be required, please notify the ICCom Administrator prior to the two-year mark.

5. Proposed Deliverables

Outline the anticipated deliverables and output from this IC activity, such as documents (e.g., white papers, reports), proposals for standards, conferences and workshops, databases, computer code, etc., and indicate the expected timeframe for each.

- White paper that defines the value proposition, use cases, and potential barriers to the development and implementation of industry standards for supply chain and asset traceability (3 months)
- Report that summarizes the results of a proof of concept project (6 months)
- Proposal for standards (3 months)

5.1 Open Source Software Development

Indicate whether this IC Activity will develop or incorporate open source software in the deliverables. All contributions of open source software for use in Industry Connections activities shall be accompanied by an approved IEEE Contributor License Agreement (CLA) appropriate for the open source license under which the Work Product will be made available. CLAs, once accepted, are irrevocable. Industry Connections Activities shall comply with the IEEE SA open source policies and procedures and use the IEEE SA open source platform for development of open source software. Information on IEEE SA Open can be found at <https://saopen.ieee.org/>.

Will the activity develop or incorporate open source software (either normatively or informatively) in the deliverables? No

6. Funding Requirements

Outline any contracted services or other expenses that are currently anticipated, beyond the basic support services provided to all IC activities. Indicate how those funds are expected to be obtained (e.g., through participant fees, sponsorships, government, or other grants, etc.). Activities needing substantial funding may require additional reviews and approvals beyond ICom.

This activity anticipates needing only the basic support provided to all IC activities, with no additional funding needs.

7. Management and Procedures

7.1 Activity Oversight Committee

Indicate whether an IEEE Standards Committee or Standards Development Working Group has agreed to oversee this activity and its procedures.

Has an IEEE Standards Committee or Standards Development Working Group agreed to oversee this activity? No

If yes, indicate the IEEE committee's name and its chair's contact information.

IEEE Committee Name: Committee Name

Chair's Name: Full Name

Chair's Email Address: who@where

Additional IEEE committee information, if any. Please indicate if you are including a letter of support from the IEEE Committee that will oversee this activity.

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

7.2 Activity Management

If no Activity Oversight Committee has been identified in 7.1 above, indicate how this activity will manage itself on a day-to-day basis (e.g., executive committee, officers, etc.).

Briefly outline activity management structure.

The activity will be managed by an executive committee. Participants have been identified who will provide project management including meeting administration, recording notes, tracking tasks, and finalizing deliverables. The white paper will be developed based on consensus and disagreements will be settled with voting. Participating in the proof of concept will be voluntary and participants will cover their own costs.

7.3 Procedures

Indicate what documented procedures will be used to guide the operations of this activity; either (a) modified baseline *Industry Connections Activity Policies and Procedures* ([entity](#), [individual](#)), (b) *Abridged Industry Connections Activity Policies and Procedures* ([entity](#), [individual](#)), (c) Standards Committee policies and procedures accepted by the IEEE SA Standards Board, or (d) Working Group policies and procedures accepted by the Working Group's Standards Committee. If option (a) is chosen, then ICom review and approval of the P&P is required. If option (c) or (d) is chosen, then ICom approval of the use of the P&P is required.

The activity will follow the baseline Industry Connections Activity Policies and Procedures

8. Participants

8.1 Stakeholder Communities

Indicate the stakeholder communities (the types of companies or other entities, or the different groups of individuals) that are expected to be interested in this IC activity and will be invited to participate.

Electric grid equipment and materials manufacturers
Electric grid operators and utilities
Engineering service providers
Department of Energy

8.2 Expected Number of Participants

Indicate the approximate number of entities (if entity-based) or individuals (if individual-based) expected to be actively involved in this activity.

10-15 individuals

8.3 Initial Participants

Provide a few of the entities or individuals that will be participating from the outset. It is recommended there be at least three initial participants for an entity-based activity, or five initial participants (each with a different affiliation) for an individual-based activity.

Use the following table for an individual-based activity:

Individual Name	Employer	Affiliation
Shane Powell	Southern Company	Southern Company
James Burger	AEP	AEP
Sean Crimmins	EPRI	EPRI
Kevin Gorham	EPRI	EPRI
Gary Huffman	Burns McDonald	Burns McDonald
Ed Scott	3M	3M
Alicia Farag	Locusview	Locusview
Bob Schultz	Locusview	Locusview

The following companies have expressed interest but have not committed a specific individual: Consolidated Edison, National Grid, PG&E, and WEC. We will also extend an invitation to the Department of Energy to participate.

Based on input from the initial participants, participation may be extended to international utilities and manufacturers.

8.4 Activity Supporter/Partner

Indicate whether an IEEE committee (including IEEE Societies and Technical Councils), other than the Oversight Committee, has agreed to participate or support this activity. Support may include, but is not limited to, financial support, marketing support and other ways to help the Activity complete its deliverables.

Has an IEEE Committee, other than the Oversight Committee, agreed to support this activity? No

If yes, indicate the IEEE committee’s name and its chair’s contact information.

IEEE Committee Name: Committee Name

Chair’s Name: Full Name

Chair’s Email Address: who@where

Please indicate if you are including a letter of support from the IEEE Committee.