



IEEE Aerospace Electronic Systems VP Industry Relations

Mike Noble

2022 AESSE Spring Board of Governors Meeting

25-26 March 2022

New York, New York, USA



1. Growing industry sponsorship of IEEE and AESS

- a. Codify and promulgate government-industry conference panels
- b. Develop another program to grow industry engagement / sponsorship
- c. Develop ways to measure impact of these initiatives on sponsorship and membership

2. Serving our industry members.

- a. Grow relevance to industry engineers
- b. Engage our society leadership and members from industry to understand what new programs we could add
- c. Implement a pathfinder new or modified program

3. Strengthening ties to corporate IEEE.

- a. Expand our engagement to leverage corporate initiatives and resources
- b. Maximize AESS support for the Institute writ large

<p>Strengths</p> <ul style="list-style-type: none">Solid industry support for IEEE subscriptionsGood participation from high tech companies in AESS domainsTech focus well aligned with industry interestsReduced prices for students and young professionalsWorld class technical journalsConferences at the pinnacle of the academic community	<p>Weaknesses</p> <ul style="list-style-type: none">Meager industry senior support for IEEE / AESSEmployee participation is more tolerated than encouragedLow government participation outside of laboratoriesWeb pages not regular resource for practitioners
<p>Opportunities</p> <ul style="list-style-type: none">Industry-focused products, e.g., interviews or invited articlesTeam with other societies on initiatives of industry interestTailor hybrid events – talks and courses – to companiesFacilitated mentoring seniors – to – young pros / studentsPublish info relevant to industry seniors in periodicals they read, e.g., fellows and Industry Innovation awards in Av Week	<p>Threats</p> <ul style="list-style-type: none">Open source publications in rapidly advancing fields, e.g., AI, put industry subscriptions at riskIndustry reticent to share information for competitive reasonsPerception of IEEE as strictly an academic institution

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Focus on growing **company-focused short courses (Luke presentation)**

- ▶ Tie to distinguished lectures ... Lead into short course
- ▶ Grow list of short course providers
- ▶ Partner across committees

2. Serving our industry members.

- a. **Grow relevance to industry engineers**
- b. Engage our society leadership and members from industry to understand what new programs we could add
- c. Implement a pathfinder new or modified program

Codify and promulgate **industry panels** at conferences

Improve **AESS website** to be more useful for practitioners

Reintroduce industry sponsor **recruiting events** at conferences

Partner with YPs on a **mentoring session** pathfinder

3. Strengthening ties to corporate IEEE.

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Join **Industry Relations Program (IRP)** pilot

- ▶ Should be starting soon according to Patrick Russoniello

Support Ariel Conn and Wolfgang Koch panel on Ethical and technical challenges in the development, use, and governance of autonomous weapons systems

- ▶ Discussed during January IR committee meeting
- ▶ Extended submission suspense to 31 March
- ▶ Sent targeted email to industry POCs
- ▶ Leverage IR committee members' networks

IEEE AESS Industrial Innovation Award

[Description](#) [Recipients](#)

Description

To recognize an individual or team at any level who were industry employees whose technical contributions have resulted in significant advances in integrated electronic systems and large-scale integrated interoperable systems within the scope of the Society.

Prize

\$1,500 USD honorarium (up to a maximum of \$4,500 USD per award), a plaque, and certificate for each awardee. In the event that there are more than three awardees, the maximum prize shall be divided equally among all awardees.

Funding

Funded by the IEEE Aerospace and Electronic Systems Society

Presentation

At a convenient IEEE AESS conference

**Cross-committee activity between IR and Awards ...
Could include others for gaining broader awareness
and appreciation of this (and other) industry awards**

Expand missionary work to conferences, courses, DLs, and pubs to grow awareness and number of submissions

Bridging the Technology Transition Valley of Death

▶ PANEL DETAILS:

- ▶ The pace of innovation in the small satellite community is accelerating. This gives an opportunity for the Space Force to accelerate the transformation of the overall architecture - which will require equally rapid technology transition from Research and Development (R&D) to production and operations. R&D organizations are often chartered to perform revolutionary research (as opposed to evolutionary research) meaning there isn't always the key advocate/warfighter or program for transition identified upfront. Unfortunately, this often results in the "technology transition valley of death" where innovative minimally mature systems aren't adopted into the future enterprise and those potential capabilities are lost. Successful transition of a new technology or new capability to acquisition and operations requires warfighter demand, building partnerships, and securing funding. In addition, other key enablers to rapid transition include rapid prototyping and development, ridesharing and improved systems integrations processes. To bridge the valley of death, we'll need to rely on these enablers prove the "art of the possible" to potential stakeholders. This panel will address both successes and challenges of technology and capability transition from R&D organizations, using real-world examples of lessons learned. We will discuss the importance of not only looking at the systems engineering of the space vehicle, but system integration with ground systems and other rideshare payloads play a critical role to the success of not just a single mission, but the collective missions that will build our future architecture.

▶ SCHEDULED ON:

- ▶ Monday Afternoon, March 07 @ 01:00, in Amphitheatre

▶ SPEAKER:

- ▶ Eleni Sims , Mark Jelonek , Stephen Shinn , Stanley Straight , Lawrence Robertson



RadarConf 2022 will hold an industry panel event.
Key leaders from industries worldwide will take questions directly from the audience.
Details of the event will be uploaded soon.
For more information, please contact the Industry Panel Chair
Tuesday, March 22nd 2022. Starts at 16:20

Chair: Charlotte Blair

Confirmed Panelists

- ▶ Kevin McSweeney, President, Telephonics
- ▶ Dominic Walker, CEO, Aveillant
- ▶ Tony Fischetti, VP Radar, STR
- ▶ Jim Day, Technical Director, Lockheed Martin
- ▶ Daniel Culkin, Director, Advanced RF Systems, NGMS



Codify and expand industry panels
Consider interview(s) to publish in the magazine

Touched on two options (may be others to add/combine), need to revisit with committee

1. Chapter-level event focused on the local chapter YP population and ideally an industry senior from the chapter area
 - Single senior speaks for 20-30 minutes and takes Q&A for another 30-40 minutes
 - Chapter leadership moderates the event
 - Could be in-person or hybrid event depending on the circumstances

2. Society-level event with the opportunity for any YPs across the society to join
 - EITHER single senior or panel of speakers
 - If a panel, select 3-4 seniors from a geographically and perhaps industry sector diverse group
 - IR committee or YP leadership moderates the event
 - Must be virtual

Cross-committee activity with Member Services and/or Conferences

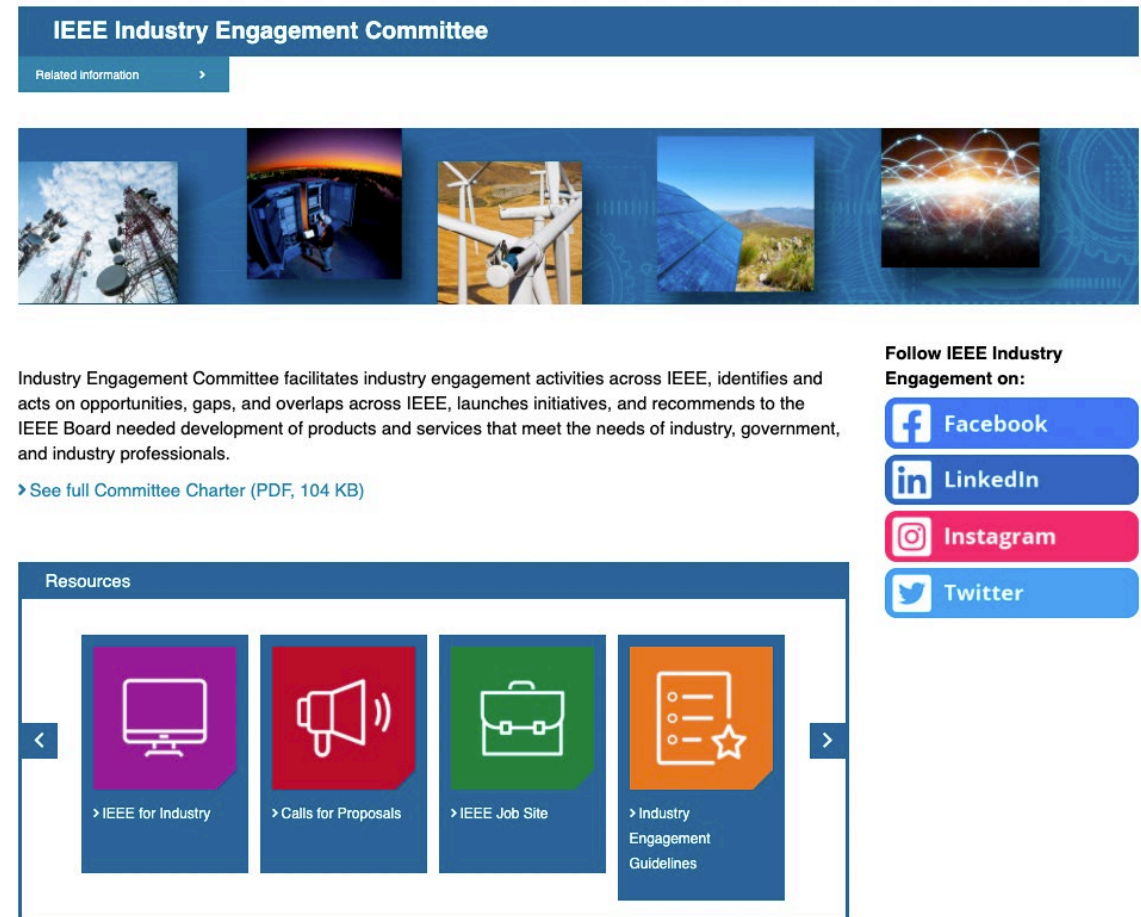
- ▶ Subodha Charles is IEEE POC
- ▶ Contacted through Patrick Russoniello
- ▶ Provided info, offered opportunity to join pilot group
 - Overview briefing in back up
 - Informational Videos: bit.ly/IRPUserGuide
- ▶ Due to the nature of IEEE Organizational Units (OU) where committees last for a limited number of years and volunteer turnover, tracking industry engagement activities and capitalizing on opportunities has been a challenge. OUs tend to have weak and ad-hoc relationships with industry.
- ▶ Industry Relations Platform (IRP) developed in this project is a centralized web application for IEEE OUs and volunteers to manage all aspects of external entity partnerships, their contacts, and related activities.
- ▶ **IRP Is basically a Customer Relations Management (CRM) tool for IEEE OUs to track, maintain, and increase engagement with industry**
- ▶ IRP pilot has been delayed, but just heard from Patrick Russoniello it may be approved this week, plan to host Subodha for one of our spring IR committee meetings to discuss



Cross-committee activity with several other committees

- ▶ Spoke with Patrick Russoniello, Senior Corporate Development lead for IEEE, data collection 2022.01.13
 - What **tool(s)** are you currently using to track your industry engagement activities at the local level?
 - Do you have needs that your **current tracking tool(s)** are not providing?
 - If we were to offer you a centralized web application for Volunteers around the world to manage all aspects of their partnerships, contacts, and industry engagement activities at the local level, would you be interested in using it as your main tool?
- ▶ Seeking additional info on “Industry Ambassador” program

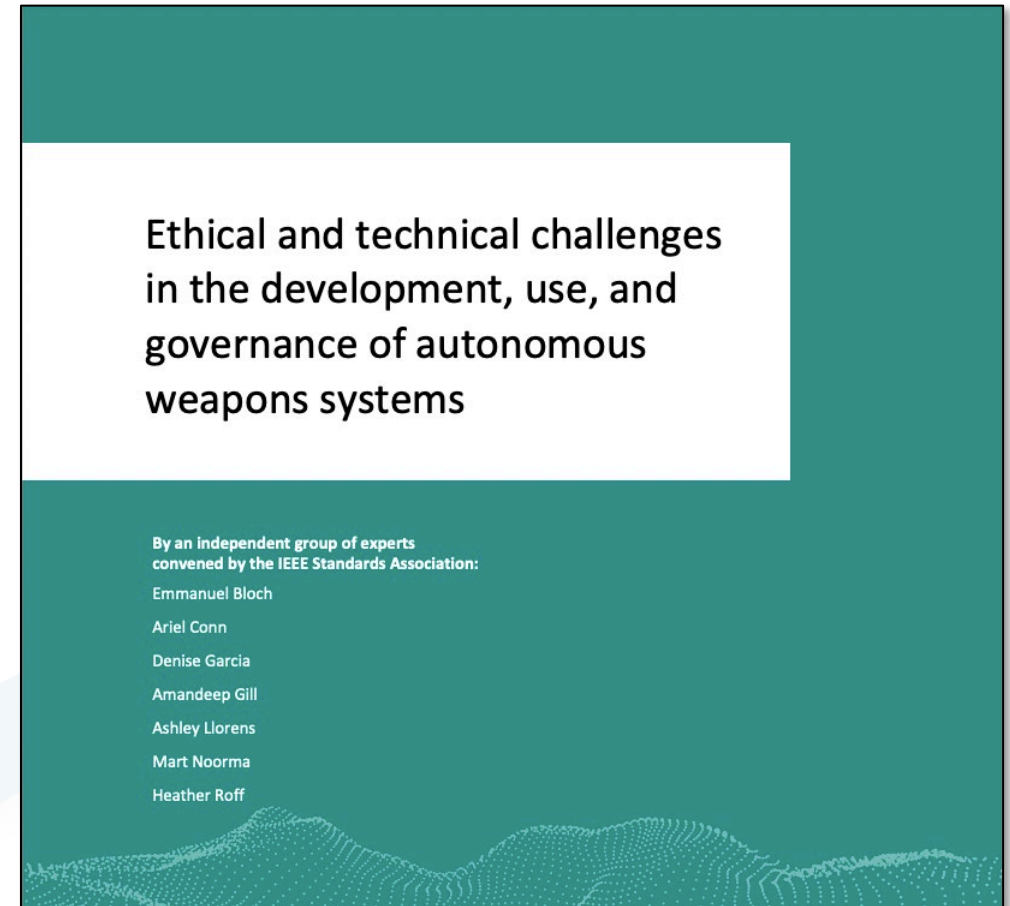
Working with IEEE Industry Engagement Committee on areas of collaboration and opportunities to expand industry participation and value



The screenshot shows the IEEE Industry Engagement Committee website. At the top, there is a blue header with the text "IEEE Industry Engagement Committee" and a "Related Information" link. Below the header is a row of five images: a telecommunications tower, a person in a control room, a wind turbine, solar panels, and a network diagram. Underneath the images is a paragraph of text: "Industry Engagement Committee facilitates industry engagement activities across IEEE, identifies and acts on opportunities, gaps, and overlaps across IEEE, launches initiatives, and recommends to the IEEE Board needed development of products and services that meet the needs of industry, government, and industry professionals." Below this text is a link: "> See full Committee Charter (PDF, 104 KB)". To the right of the text are four social media buttons: Facebook, LinkedIn, Instagram, and Twitter. Below the social media buttons is a "Resources" section with four cards: "IEEE for Industry" (with a computer icon), "Calls for Proposals" (with a megaphone icon), "IEEE Job Site" (with a briefcase icon), and "Industry Engagement Guidelines" (with a document icon and a star).

- ▶ Introduced by Ariel Conn after the last BoG
- ▶ Ariel Conn and Wolfgang Koch to join our February IR committee meeting to discuss
- ▶ <https://standards.ieee.org/industry-connections/autonomy-ai-defense/>

**Potential cross-society and cross-committee activity
Consider other emerging technology areas for similar initiatives**



Good session with Ariel and Wolfgang, working follow ups

Action Item ID	Status	Action Description	Comments/Resolution
AESS-SPM-Jan 2020 AI-0952	Open	Target two or three industry leaders and send them 10 copies of the magazine with a targeted letter.	Status?
AESS-SPM-Jan 2021 AI-1010	Open	Reach out and make contact with Michael Griffin, NASA Administrator (2005-2009); Under Secretary of Defense for Research and Engineering (2018-2020); and new AESS IEEE Fellow (elevated by AESS). Invite him to join the Glue Tech Panel.	Complete
AESS-SPM-Jan 2021 AI-1034	Closed	Reach out to DASC 2021 to see about implementing an Industry Panel similar to that at the Aerospace Conference and the Radar Conference. Mike Braasch or Walt Downing will send you the contacts.	Status?
AESS-SPM-Jan 2021 AI-1036	Closed	Follow up with Marina Ruggieri to possibly start an industry panel within the Glue Tech Panel. Also follow up on adding MetroAeroSpace to the list for starting an industry panel. Pasquale Daponte is contact.	Status?
AESS-SPM-Jan 2021 AI-1038	Open	Increase industry senior awareness of IEEE/ AESS products/ services. Establish senior POC list for each company from IEEE corporate and host at least one webinar to discuss and educate them on our products/services. Complete database by April 1, 2021; Webinar by October 1.	Afonso has led several engagements in Europe; engaged our LHX POC, need to collect POCs for the other major AESS industry stakeholders
AESS-SPM-Jan 2021 AI-1039	Open	Develop a strategy for improving the relevance of the AESS web site to industry practitioners. Hold an IR committee focused strategy session, invite other interested AESS board members and IEEE corporate lead team, draft results into a concise strategy with proposals suitable for the board and other actions; present to the AESS Board. Complete strategy session by July 1, 2021; draft document by September 1; Fall Board meeting presentation.	Providing input on content for IR page on revamped AESS site
AESS-SPM-Jan 2021 AI-1040	Open	Codify partnership between AESS/ IR committee and IEEE corporate activities lead. Host Patrick Russoniello, IEEE corporate activities lead, and his team at an IR committee meeting, capture opportunities for AESS and corporate partnership to achieve mutual goals, brief Board. Complete IR committee meeting by July 1; draft document by Sept 1; Fall Board meeting presentation.	Informal partnership sufficient, set up cadence with Patrick Russoniello, IEEE corp activities lead
AESS-SPM-Jan 2021 AI-1042	Open	Review the IEEE global industry strategy and provide input to IEEE Industry Advisory Board Ad Hoc Committee. Distribute the IEEE global industry strategy to IR committee for individual review, collect comments and discuss during an IR committee call, summarize consensus feedback and provide to BoG and IEEE Industry Advisory Board Ad Hoc Committee. Complete distribution of IEEE global industry strategy by March 1; receive feedback by April 1; review in committee by June 1; consolidate into document by Aug 1; Fall Board meeting presentation.	Doesn't appear to be an actual Industry Strategy document (despite reference in our AESS document) (checked with Patrick Russoniello)
AESS-SPM-Jan 2021 AI-1043	Open	Host a young professional's career development forum with one or more industry seniors. Identify a small group of industry seniors to participate in a career development forum webinar; advertise the webinar through the QEB and society chapters; host a moderated webinar. Secure small group by May 1; advertisement by August 1; webinar by October 1; lessons captured and presented at the Fall Board meeting. Bring Mentoring Program into this working with Francesca Filippini.	Coordinating a pathfinder event with Philipp Wojaczek for an industry senior led mentoring webinar
AESS-SPM-Jan 2021 AI-1044	Open	Hold a webinar with as many chapter chairs as possible to leverage chapters and the contacts with chapter members companies. We have 56 chapters. 100 with student chapters.	Status?
AESS-BOG-Spring-'21 AI-1048	Open	Check for the IEEE Global Industry Strategy document. If there isn't one, remove it from our other documentation. Kathleen said there is one. Kathleen: Send Rob Sabatini's contact information to Mike Noble.	N/A - no document
AESS-BOG-Spring-'21 AI-1050	Open	Develop the idea from Fulvio to sign multi-year MOUs between our flagship conferences and top industry companies.	Status?
AESS-BOG-Fall-'21 AI-1061	Open	Discuss the potential partnership of the mentoring program and conference corporate partnerships.	Need to follow up during BoG meeting
AESS-BOG-Fall-'21 AI-1062	Open	Work with CCLLC on a survey to gather data for an article.	Not Started, will initiate during BoG meeting
AESS-BOG-Fall-'21 AI-1063	Open	Reach out to Dale Blair regarding developing a special issue with industry; ask a guest editor from the industry.	Will initiate during BoG meeting
AESS-SPM-Feb 2022 AI-1078	Open	Mike Noble to meet with Braham Himed and Lance Kaplan to determine how to better integrate Industry Relations with AESS-sponsored conferences and publications.	Will initiate during BoG meeting
AESS-SPM-Feb 2022 AI-1079	Open	Mike Noble to develop a priority list and short-term goals of the IR objectives by Spring BoG meeting.	Completed draft, will present at BoG meeting



*Advancing Technology
for Humanity*

- ▶ Survey through conference catalysts →
- ▶ Website review and inputs
- ▶ Webinar with chapter chairs to discuss industry relations
 - Work with Bob Rassa
 - 56 chapters
- ▶ Finalize IR 2022 objectives and assign leads

IEEE STUDENT ACTIVITIES

Five reasons to join IEEE—From a student's perspective

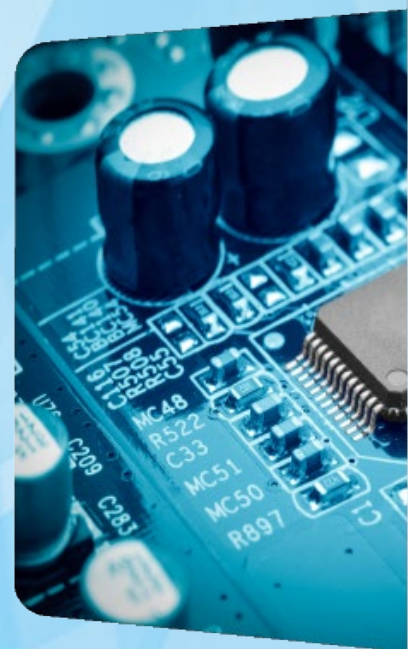
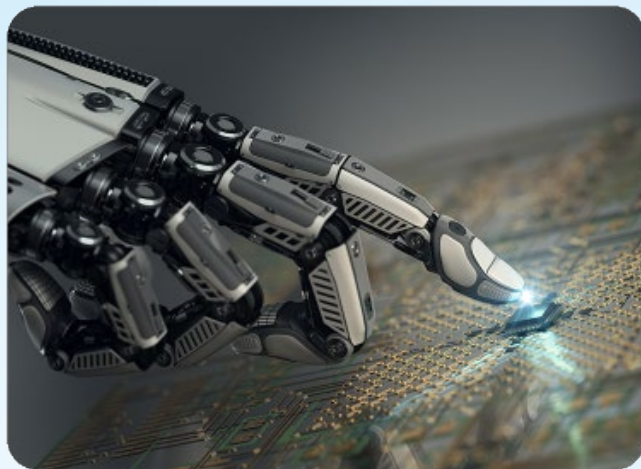
by Suxia Cui

The IEEE Zeta Lambda Chapter is hosted at Prairie View A&M University (PVAMU), the second-oldest public university in Texas, founded in 1876. PVAMU is a member of the Texas A&M University System, a historically Black college and university. The PVAMU IEEE association is the platform to connect our students to industry and academia. At our biweekly meetings, industry partners present hiring information, faculty members give technical presentations, and students organize training for both software and hardware. Each year, we host the PVAMU annual IEEE workshop. The next upcoming workshop is scheduled for March 2021, and the focused topic is data sciences. The workshop is sponsored by the PVAMU Electrical and Computer Engineering Department as well as National Science Foundation grants (OAC 1827243 and OAC 1925764). If you ask former IEEE Zeta Lambda Chapter President Rody Fwamba why he joined IEEE, he will share with you the following five reasons.

- 1) It is an opportunity to demonstrate time management. Partaking in college clubs and organizations alongside my academic responsibilities allows me to practice discipline and time management, which is a handy skill in my personal life. It's the one most employers will be looking for after graduation.
- 2) It builds self-confidence. As a student successfully balancing a full plate of academia and extracurricular activities, it helped me build up the self-assurance needed to take on more challenges.
- 3) It helps you become more collaborative. IEEE and photovoltaic robotics activities pull together all kinds of students. Participating in them encourages me to collaborate, not to mention learning how to work together on a larger-scale project. Collaborative work comes with opportunities to step up and lead my peers, manage projects, and work through any road bumps along the way.
- 4) It is a chance to build skill sets. IEEE also allowed me to develop hard skills I may or may not learn in class. As an IEEE president, my role was to create relationships with industries and alumni as well as to execute high-profile events, all valuable specialized skills.
- 5) It can lead to new network opportunities. Connections with others in my field can serve me well after graduation. Getting involved in IEEE has improved my peer network, which increases my exposure and learning in my school environment and social life. I was making friends effortlessly when I shared similar interests or passions with like-minded people. IEEE also allows you to branch out and meet students outside of your immediate social circle.

Digital Object Identifier: 10.1109/MPDT.2020.3030156
Date of current version: 26 December 2020

Solidify cross-committee and –society collaborations



IEEE Industry Relations Platform (IRP)

*Subodha Charles, Eddie Custovic, Dhammika Marasinghe
Patrick Russoniello (Staff)*



IEEE Industry Relations Platform

- Due to the nature of IEEE Organizational Units (OU) where committees last for a limited number of years and volunteer turnover, tracking industry engagement activities and capitalizing on opportunities has been a challenge. OUs tend to have weak and ad-hoc relationships with industry. The [IEEE Industry Engagement Guidelines](#) lists the following best practices when engaging with the industry:
 - Bird's eye view of industry partnerships
 - Easily identify past engagements
 - Reduce conflicts
- In addition, there is no IEEE platform for volunteers to use to track these activities which supports these guidelines. The Industry Relations Platform (IRP) developed in this project is a centralized web application for IEEE OUs and volunteers to manage all aspects of external entity partnerships, their contacts, and related activities.
- IRP is basically a Customer Relations Management (CRM) tool for IEEE OUs to track, maintain, and increase engagement with industry.
- Expected outcomes:
 - Effective and long-term industry engagement for every IEEE OU
 - Reduce repetitive work such as creating company contact lists
 - Long-term industry partnerships that can drive local events
 - With more local companies partnering with OUs, eventually, this will lead to requiring less financial support from IEEE to support OU events.
 - Demonstrating relevance of IEEE to companies and individuals in industry
 - Integration into IEEE systems and data sharing to allow IEEE to capitalize on more opportunities with industry.

Summary of Activities Completed So Far

- ▶ Completed development of Phase-I and Phase-II of IRP
 - IRP Overview: <https://youtu.be/xPAIZh-bL-l>
 - Portal to be used by the volunteers: irp-portal.ieee.org
 - Public web: irp.ieee.org
 - This covers all the features planned at the beginning of the pilot
 - Work was carried out in collaboration with IEEE IT
- ▶ Integration with IEEE IT infrastructure:
 - IRP is hosted on the Amazon Web Services (AWS) account belonging to IEEE. IEEE IT team allowed required infrastructure access to the vendor (development team)
 - IRP uses IEEE single sign-on features which means that users are able to use their IEEE credentials to access IRP. This makes the global scaling process seamless.
 - IRP is integrated with IEEE OU data to get officer details (chair, secretary details of OUs), geographical details of OUs (section/region/country that a particular OU belongs to) and email addresses of officers. Measures are taken to ensure the security as well as GDPR compliance.
- ▶ Formed a focus group of 15+ IEEE Volunteers, Members and Staff, representing all IEEE Regions and continuously receive rounds of feedback during development
 - Held several meetings with different stakeholders (including IEEE MGA and Corporate) during the development process

Summary of Activities Completed So Far

- ▶ Currently conducting the pilot in Sri Lanka Section and Region 3
 - Data added from 12 projects that took place between 2018 and 2021 in Sri Lanka
 - Pilot in Region 3 ongoing with completion planned for mid October 2021.
- ▶ Completed a [video user guide](#) and a [user guide document](#)
 - Review and feedback received from the IEEE Web/Branding Team, IEEE IT and IEEE MSD Salesforce team
- ▶ Sent a [survey](#) to gather feedback to pilot/Focus Groups.
 - Initial results collected from Sri Lanka Section, IEEE IEC Tools working group, IRP focus group and Region 3 executive committee.
 - Expecting more feedback from:
 - Volunteers piloting IRP in Region 3
 - Ron Jensen, Gerardo Barbosa (MGA IT Coordination and Oversight Committee - ITCO), Marty Schulman and Eugene Khusid.
 - IEEE IT staff
- ▶ Did a demo to the Current and VP-Elect of MGA (Maike Luiken, David Koehler), MGA Volunteers and MGA Staff

Plans for the Rest of 2021

- ▶ Complete gathering feedback from different stakeholders
- ▶ Compile the findings in a report
- ▶ Have a presence at the November IEEE meeting series (virtual booth)
- ▶ Prioritize features to implement for next phase
- ▶ Discuss roadmap with IEEE MGA and Corporate
 - Discuss a communications and roll-out plan
- ▶ Explore potential funding avenues including NIC for future enhancements