



**2023**  
**ODVA**

Industry Conference and 22nd Annual Meeting

**22nd Annual Meeting of Members**  
**October 19, 2023**



**2023**  
**ODVA**

Industry Conference and 22nd Annual Meeting

**22<sup>nd</sup> Term in Review**  
**Al Beydoun**  
**President and Executive Director**  
**ODVA**



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## Leadership and Organization Overview

## Board of Directors



Dr. Rolf Birkhofer  
Endress+Hauser



Mr. Jon DeSouza  
HARTING



Mr. Satoshi Kojima  
OMRON



Mr. Davis Mathews  
Phoenix Contact



Mr. Scott Miller  
Rockwell Automation



Mr. Thomas Petersen  
Danfoss



Mr. Brian Reynolds  
Honeywell



Mr. André Uhl  
Schneider Electric

## Technical Review Board

- Mr. Joakim Wiberg, Chair, HMS Networks
- Mr. Raj Bandekar, Honeywell
- Mr. Torben Bertelsen, Danfoss
- Mr. Mirko Brcic, Endress+Hauser
- Dr. Vivek R. Dave, HARTING
- Mr. Arulkumar Karuppanagounder, Schneider Electric
- Mr. Gregory Majcher, Rockwell Automation
- Mr. Kai Michel, Hilscher
- Mr. Toshiyuki Ozaki, OMRON

## Market Advisory Committee

- Mr. Joe Bastone, Honeywell
- Dr. Vivek Hajarnavis, Rockwell Automation
- Mr. Magnus Jansson, HMS Networks
- Mr. McKenzie Reed, HARTING
- Mr. Ryo Shimizu, OMRON
- Ms. Tonya Wyatt, Micro Motion (Emerson)
- Ms. Feiyan Zhao, Schneider Electric



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## **ODVA Staff Update**

- Recognition of staff with 20 years of service



Adrienne Meyer



William (Bill) Henry



- Recognition of staff with 10 years of service



David Crane



Stacey Anttila



Matthew Frazer



Qi Zeng

## In Memory

We are very sorry to announce sad news from the ODVA staff. Long time ODVA staff member Lance Smith passed away unexpectedly on September 8. Lance had been a test engineer with ODVA since 2013 and had assisted hundreds of customers over the decade he was with ODVA. Lance was always kind to all of his fellow employees on our small, tight-knit team and will be deeply missed.





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## Overview of the 22<sup>nd</sup> Term

- Membership continues to grow, reaching almost 400 members
- ODVA continues to expand and enhance its technologies with the publications of specifications twice a year through 13 active working groups, publishing over 69 Specification Enhancements and Technical Document Enhancements in key areas of CIP functionality and features including security, safety, process, and SPE for both Ethernet-APL and in-cabinet applications
- ODVA maintains a high-quality conformance test service that is up to date with its specifications release cycles. CT20 version, which was just released this week, includes support for: Ethernet-APL physical layer, in-cabinet protocol and physical layer, enhanced new features of CIP Security, and more
- Adoption and promotion of ODVA's technologies have been expanded through training, publication of articles, interviews, and media posts
- Promotion of ODVA's technologies at global events and trade shows has continued in Europe, Japan, China and Korea
- ODVA continues its support and commitment to the process industry with the release of the Ethernet-APL specification, the release of Process Device Profiles, and the ownership of the PA-DIM Specification

- Collaborated with several organizations to establish the TSN Industrial Automation Conformance Collaboration (TIACC) to develop Conformance Test Specification for TSN 60802 Industrial Profile. The working group has kicked off.
- Continue to work with other SDOs within the Industrial Ethernet Security Harmonization Group (IESHG) to harmonize on industrial Ethernet security concepts, facilitate the usage of security technologies, and provide support information for end-users when implementing security in their automation systems. The group published their first whitepaper and is planning others.
- Collaborated on device integration tools with the FieldComm Group and established support for EtherNet/IP with the FDI Device Package, as well as continuing work with the FDT Group to establish support for FDT3.0
- Continuing to expand the EtherNet/IP ecosystem to enhance device to cloud connectivity through our joint working group with the OPC Foundation to develop the first version of the OPC-UA companion specification for EtherNet/IP
- ODVA is collaborating in a joint initiative to develop standardized information model on OPC UA for energy consumption management in Industrial Automation
- Made great progress to translate EtherNet/IP specifications into Chinese GB/T Standard



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**Key Activities and Membership Update**  
**Adrienne Meyer**  
**VP of Operations and Membership**  
**ODVA**

## Global Activities

- In Europe, ODVA highlighted the benefits of EtherNet/IP, including CIP Security and SPE at:
  - Hannover Messe 2022 and 2023
  - ACHEMA 2022
  - SPS 2022





- TAG China featured EtherNet/IP at the Control Engineering China Forum



## Global Activities





- TAG Korea held its first EtherNet/IP + Ethernet-APL Conference



## Global Activities

- TAG Japan participated in Industrial Open Net Exhibition 2023 and held Implementer Seminars



Seminar



Demonstration  
machine display



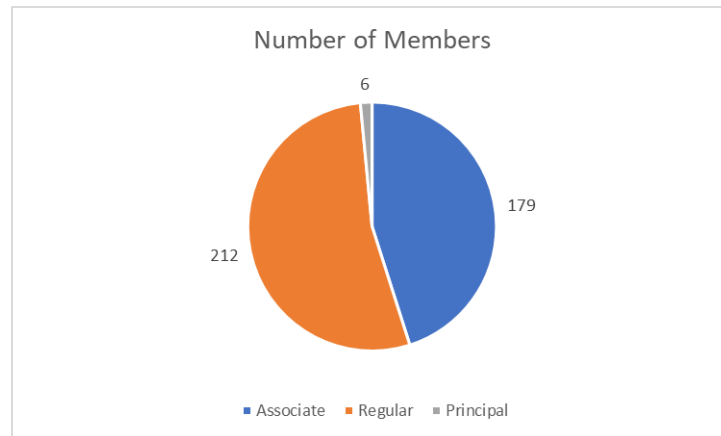
Special project  
IoT connection  
demo



- ODVA continued to add new Members from around the world
- Over 3% growth of memberships even after pandemic bump
- Another 95 vendor IDs were issued to companies beginning to make EtherNet/IP products



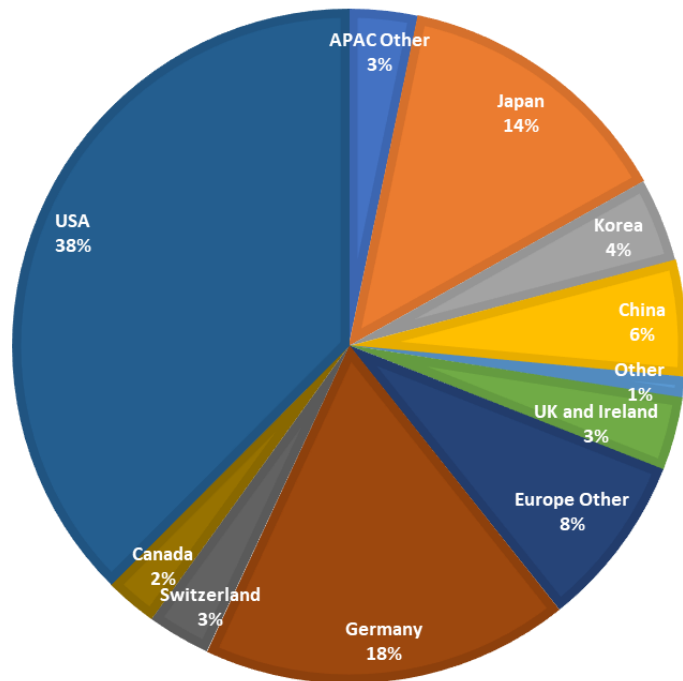
## Growth over the 22<sup>nd</sup> Term



Current Membership Level	Number of Members
Principal	6
Regular	212
Associate	179
<b>TOTAL</b>	<b>397</b>

## Growth over the 22<sup>nd</sup> Term

NUMBER OF MEMBERS



Region	Number of Members
APAC Other	13
Japan	54
Korea	16
China	22
Other	4
UK and Ireland	14
Europe Other	33
Germany	70
Switzerland	12
Canada	10
United States of America	149

### Mix of Membership by Principal Place of Business, as of October 6, 2023

## Growth over the 22<sup>nd</sup> Term

- ODVA engaged in a wide range of activities to support the growth of EtherNet/IP and use of EtherNet/IP products, including:
  - Official launch of Ethernet-APL, including joint demonstrator at ACHEMA 2022
  - Expansion of free training for new vendors to include CIP Security and additional content for EtherNet/IP and CIP Safety
  - Concentrated review by the Market Advisory Committee on features, benefits, branding, and messages related to the marketing of EtherNet/IP enhancements
  - Over 100 mentions and articles in 2022 alone, including deep dives into ODVA technologies as well as updates on technology enhancements
  - Launch of educational videos on EtherNet/IP for Process Automation, as well as the video you saw today on ODVA Membership
  - Delivery of beta version of conformance test software for free upon request, exclusively to ODVA Members

ODVA Member participants have been integral to the success of ODVA training courses in educating new developers on ODVA technologies. In the past term, ODVA awarded the title of “ODVA Designated Trainer” to the following individuals for hard work and willingness to provide their expertise.



## Growth over the 22<sup>nd</sup> Term

- **Drew Baryenbruch** – Real Time Automation
- **Chatrpathi GV** – Utthunga
- Jamie Gallant – Hilscher GmbH
- Jim Grosskreuz – Rockwell Automation
- **Vivek Hajarnavis** – Rockwell Automation
- Andreas Kramer – HMS Networks
- Stefan Kraus – HMS Networks
- **Rob Lodesky** – HMS Networks
- Mike McGrath – HMS Networks
- Mike Schaffner – Rockwell Automation
- **Jack Visoky** – Rockwell Automation



## Looking Forward to the 23<sup>rd</sup> Term

- ODVA is focused on external education and internal streamlining
  - External
    - New videos in the pipeline regarding testing and other topics
    - Expanded language access to educate on ODVA technologies more easily
    - Continued work to expand membership benefits
  - Internal
    - Continued work to ease licensing and membership process for all companies
    - Continued efforts to ease interaction with ODVA processes

## Looking Forward to the 23<sup>rd</sup> Term

- Study on SPE: Exclusively for ODVA Members
- Distribution in early November – watch your email!





## Looking Forward to the 23<sup>rd</sup> Term

- Launched this week:  
[jp.odva.org](http://jp.odva.org)!
- All the educational content of [odva.org](http://odva.org) with ability to expand
- Additional languages anticipated



The screenshot shows the ODVA website homepage. At the top left is the ODVA logo. To its right is a navigation menu with items: テクノロジーと標準, サブスクリプションとサービス, コミュニティー, 適合および周辺製品, ニュースとイベント, 会員, and 約. A search bar is located in the top right corner. The main content area features a large image of industrial machinery. Overlaid on this image is the text: 産業オートメーションの未来に向けて. Below this is a paragraph of Japanese text: ODVAは、世界をリードする産業オートメーション関連企業を会員として規格策定を行う組織です。ODVAでは、産業オートメーションにおけるオープンで相互運用可能な情報通信技術の発展に取り組んでいます。 At the bottom left of the main content area is an orange button with the text: もっと詳しく.

## Looking Forward to the 23<sup>rd</sup> Term

- New Association Management System (AMS) coming!
  - AMS is a CRM for associations
  - Goals of new AMS:
    - Single sign-on for ordering test services, subscriptions, and events
    - Invoicing directly from the orders, speeding delivery and speeding payment acknowledgement
    - Better access to data to allow ODVA staff to adapt programs and services





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**Technology Review**  
**Joakim Wiberg**  
**CTO and Chair of TRB**  
**HMS Networks**

- A total of 69 SEs and TDEs
- Two publication cycles in 2022
- Two publication cycles in 2023 (will be complete in November)
  
- A total of 23 volume revisions
  - Vol 1 – 4
  - Vol 2 – 4
  - Vol 5 – 3
  - Vol 7A – 1
  - Vol 7C – 4
  - Vol 8 – 4
  - Vol 9 – 3

## Trends in manufacturing affecting us

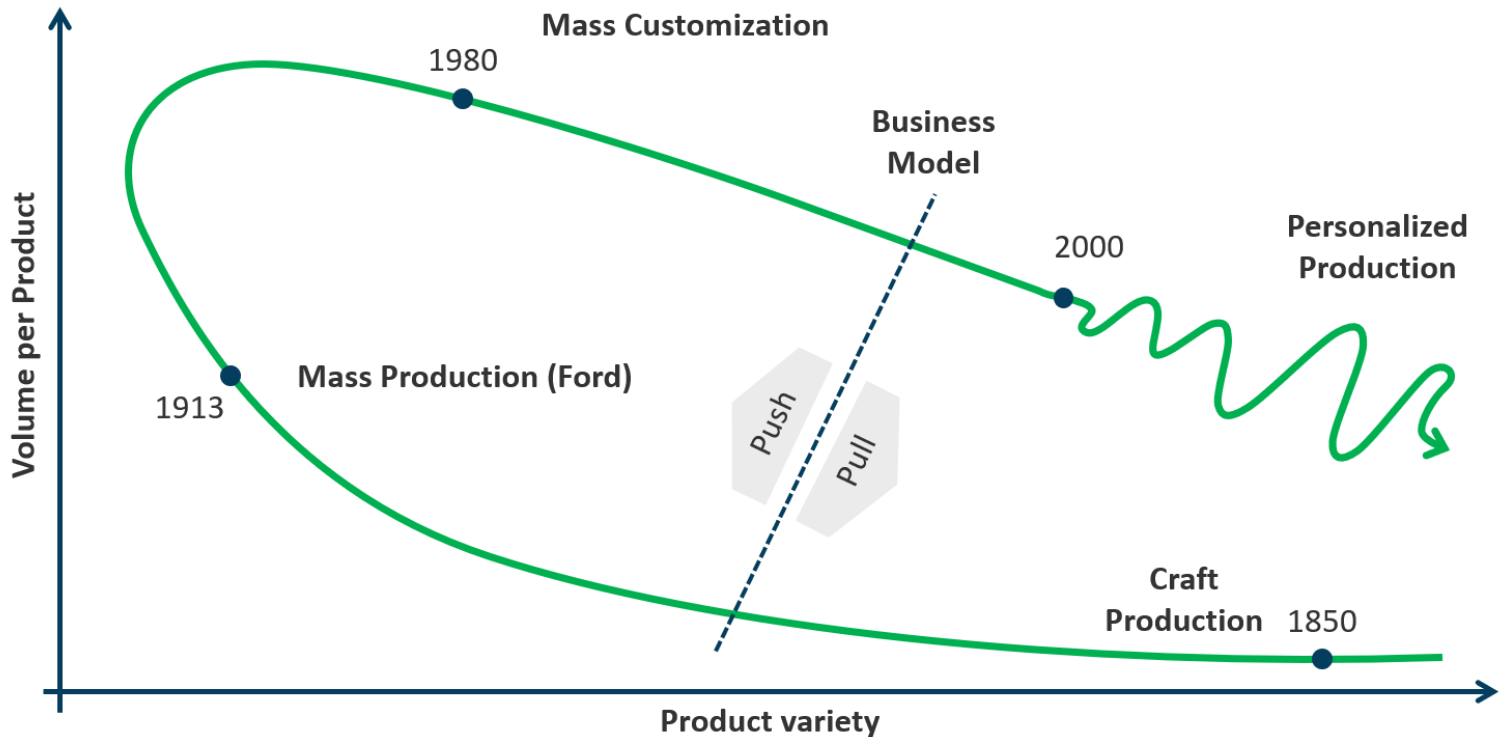
What manufacturing used to look like...



...how manufacturing looks today



# Trends in manufacturing affecting us



# Trends in manufacturing affecting us



Brussels, 15.9.2022  
COM(2022) 454 final

2022/0272 (COD)

Proposal for a

**REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE**

**on horizontal cybersecurity requirements for products with digital elements  
amending Regulation (EU) 2019/1020**

**NIST Special Publication  
NIST SP 800-82r3**

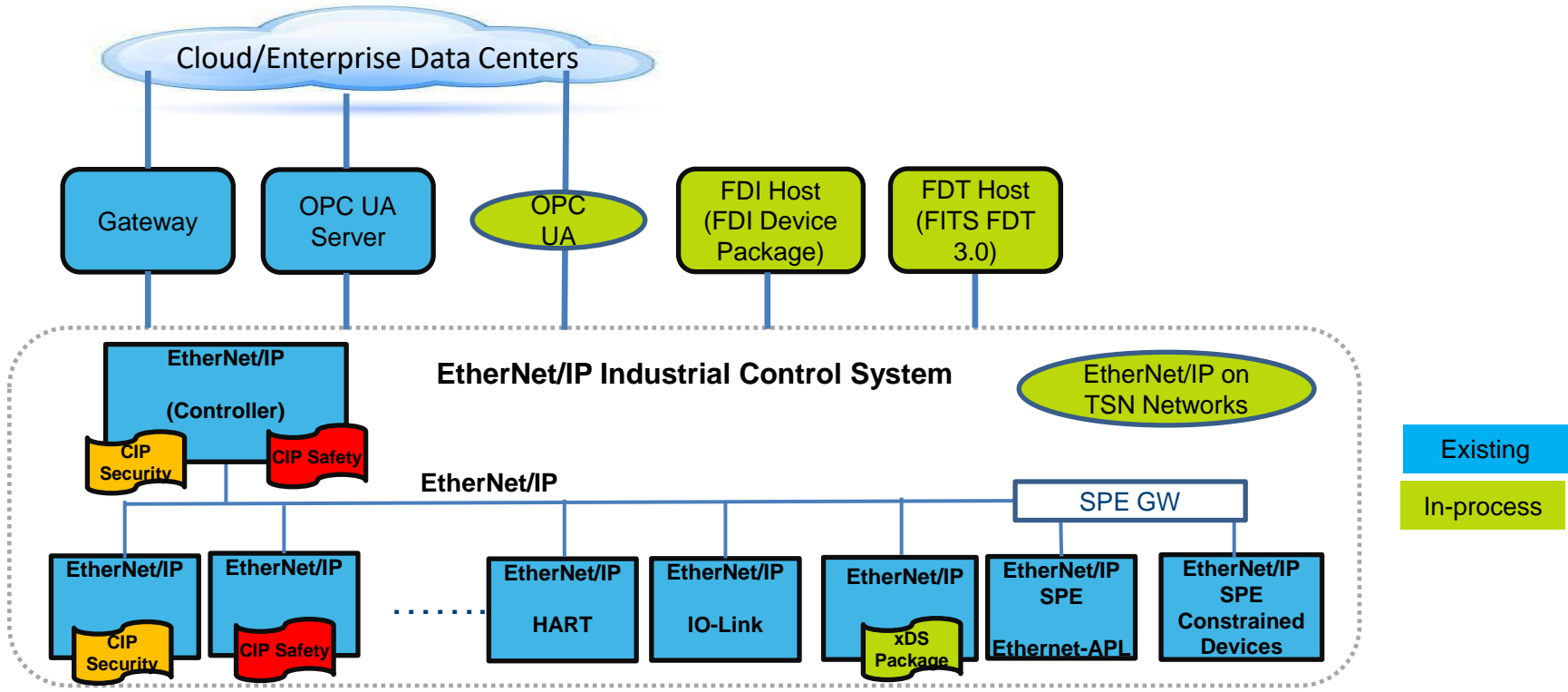
## **Guide to Operational Technology (OT) Security**

Keith Stouffer  
Michael Pease  
CheeYee Tang  
Timothy Zimmerman  
*Smart Connected Systems Division  
Communications Technology Laboratory*

Victoria Pillitteri  
Suzanne Lightman  
*Computer Security Division  
Information Technology Laboratory*

Adam Hahn  
Stephanie Saravia  
Aslam Sherule  
Michael Thompson  
*The MITRE Corporation*

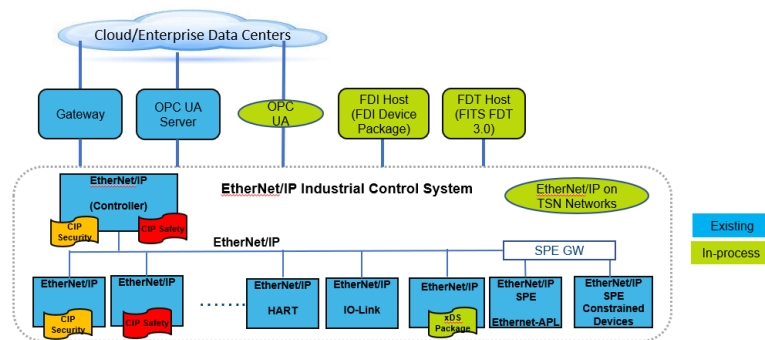
# Expansion of the EtherNet/IP Ecosystem





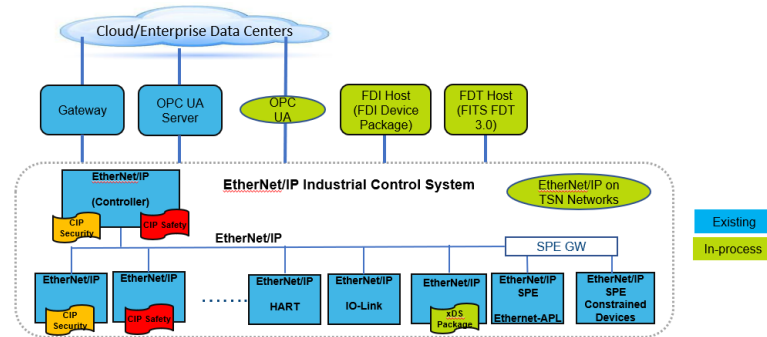
# Keep EtherNet/IP Relevant

- Strengthening our position in current market segments
  - Security
  
- Expanding into new segments
  - Process
  - Device to Cloud
  - In-Cabinet



# Accomplishments since 21<sup>st</sup> Annual Meeting

- Security
  - Product Authenticity Check
  - Device Based Firewall
  - Threat Model
  
- Process
  - Process Device Profiles release
  - Concurrent Connections release
  
- Staying current
  - Conform to last IEC 62439 PRP/HSR standard
  - Multiple clarifications related to LLDP



## In Process and Proposed Plans for Next 12-18 Months

- Studying mechanisms to serve Device to Cloud (Data Science use cases paper)
- Program review of xDS
- Extend Concurrent Connections to CIP Safety (serving process safety)
- Delivering all config to a device with a file (from the Automatic CIP Security paper)
- Start creating foundation for TSN
- Explore inclusion of new transition media – wireless and SPE
- State of the art security, using the latest security transports
- Investigate impact and implement use of IPv6