Call to Order

General Session and 16th Annual Meeting of Members

www.odva.org
Flake Fatigue

If you have had enough cold and snow, please... raise your hand.
Can It Get Worse?  
Yes, It Can.  Snowmageddon Is Here Again.

Ann Arbor Forecast for Wednesday, March 12. Snow during the morning will give way to snow showers during the afternoon. Chance of snow 70%. Snow accumulating 3-5 inches(7.5-12.7cm). Cold. Morning high 27F(-3C) with temps falling to near 15F (-9C) and overnight low -3F(-20C). Windy. Winds N at 25 to 35mph(40-56kph). REALLY?
YeeHaa!

We’re gonna go do some CIPing in Arizona!
Woo-hoo! Welcome to Phoenix!
8:15 AM  16th Term in Review - Report on the Activities of the Association
9:30 AM  Membership - Presentation of Candidates for Election
9:45 AM  Election and Break
10:15 AM User Perspective from the Field - EtherNet/IP in Packaging
10:45 AM Software Defined Networks - Will They be the Next Frontier in Industrial Automation?
11:30 AM 17th Term - Looking Ahead
12:00 PM Adjourn
Governance Directors

Michael Höing  
VP, Electronics Business Unit  
Weidmüller Interface

Cyril Perducat  
SVP Strategy-Technology-Solutions/CTO  
Schneider Electric

Dr. Jürgen Weinhofer  
VP, Control Technology & Architecture  
Rockwell Automation

Tony Shakib  
VP, Business Development  
IoT Vertical  
Cisco Systems

Dr. Thomas Bürger  
VP, Engineering Automation Systems  
Bosch Rexroth

Dr. Raimund Sommer  
Managing Director, Process Solutions  
Endress+Hauser

Ikuo Tateishi  
Corporate Planning Manager, OEI  
Acting CEO, STI  
Omron
Governance Officers

- **Cyril Perducat**, Chairman of the Board
- **Katherine Voss**, President & Executive Director
- **Rich Harwell**, Chief Technology Officer
- **Christopher Lynch**, Secretary
- **Jürgen Weinhofer**, Treasurer
16th Term in Review
Report on Activities of the Association

Katherine Voss, president & executive director

General Session and 16th Annual Meeting of Members

www.odva.org
Global Presence

Mix of Membership by Principal Place of Business

- USA & Canada: 48%
- Germany: 16%
- Japan: 14%
- Other Asia: 6%
- Other Europe: 12%
- All Other China: 2%
Global Presence

Focused Areas of Operation
Global Presence

Industry Awareness Face-to-Face Activities

- EtherNet/IP Seminars and Forums: Beijing, Seoul, Shanghai, Tokyo (2X)
- ODVA Exhibits at Tradeshows: AIMEX (Korea), Hannover Fair (Hannover), Industrial Automation Show (Shanghai), PackExpo (Las Vegas), SPS/IPC/Drives Show (Nuremberg, 2X), System Controls Fair (Tokyo)
- ODVA Media Briefing: Hannover, Nuremberg (2X)
- ODVA Participation at Industry Events: ARC Forum (Orlando, 2X), Automation Fair (Houston), Industrial Open Network Fair (Osaka, Tokyo)
Global Presence

Industry Awareness Face-to-Face Activities

Germany

Japan

China

Korea
Global Presence

Vendor Adoption Face-to-Face Activities

- EtherNet/IP QuickStart: Ann Arbor, Boston, Chicago, Frankfurt (2X)
- EtherNet/IP Implementor Seminar: Tokyo (3X)
- EtherNet/IP Implementor Workshop: Ann Arbor (2X), Boston, Chicago, Frankfurt (2X)
- EtherNet/IP PlugFest: Ann Arbor, Seligenstadt
- ODVA College: Kanazawa, Nagoya, Osaka, Tokyo
Global Presence
Vendor Adoption Face-to-Face Activities

China

Japan

Europe

North America
Global Presence
ODVA in China

Investment started in 2007

HQ Staff supporting China operations

ODVA Automation Technology Service (Shanghai), Ltd.
- TAG China
- TSP China (TÜV Rheinland)
- RMB bank account at Bank of America
Global Presence
ODVA in China

Office
New Hualian Mansion
755 Middle Huai Hai Road
Shanghai
Global Presence
Chinese “GB” Standardization

Established
- EtherNet/IP
- DeviceNet
- ControlNet

In-Process
- CIP Safety
- CompoNet

Working Committee for the Chinese Standardization of CIP Safety
ODVA on Weibo

2013年10月29日 13:43 问答(99)

ODVA
ODVA 将参加2013工博会，展位号：W1D107，欢迎大家前来参观。

2013年8月30日 09:05 阅读(102)

ODVA
http://url.cn/F70w1U 欢迎收听收看EtherNet/IP在线技术讲座。

2013年7月31日 09:35 阅读(79) 全部转播和评论(2)

2013年10月29日 13:43 阅读(99)
Global Presence
TAG China

1. Cisco Systems
2. Deutschmann
3. Hilscher
4. Panduit
5. Renesas
6. Rockwell Automation
7. Schneider Electric
8. Wago

Meet Shirley Li, managing deputy director of ODVA ATS, who is helping to build this team. . .

. . . including joint marketing with the Chinese Association of Automation.
Living Initiatives are a Central Aspect

- 2010: Growth
- 2010: Energy
- 2011: Machinery
- 2012: Process

*In the 16th term, the Growth Initiative for the 17th Term and beyond has been a key work activity of the Board and ODVA staff. Working groups have made significant progress on the others. Together these initiatives reinforce one another.*

More on energy, machinery and process now...stay tuned for an update on growth after the break.
**Key Milestones**

Release of Phase 2a, and significant progress on Phase 2b in anticipation of submittal in the next publication cycle.

**On Track!**
Strategic Plan
Initiative Energy

LIVE MARCH 12, 2014!
Multi-vendor interoperability demonstration of OEU.
(Base Energy Object and the Electrical Energy Object)
White paper published in February 2014 completed ODVA’s series of “optimization” white papers resulting from the formation of ODVA’s initiatives.
White paper published in February 2014 completed ODVA’s series of “optimization” white papers resulting from the formation of ODVA’s initiatives.

1. Optimization of Energy Usage (OEU)

2. Optimization of Machine Integration (OMI)

3. Optimization of Process Integration (OPI)

Strategic Plan Initiative Process

White paper published in February 2014 completed ODVA’s series of “optimization” white papers resulting from the formation of ODVA’s initiatives.
ODVA Expects to Announce Formation of a SIG for Process Applications in 2014
Strategic Plan
Initiative Machinery

SIG for Machinery Information Formed: Phase 1 Work is Machine-to-Supervisory Communications

SIG Participants from Members
- Bosch Rexroth
- Cisco Systems
- Omron
- Rockwell Automation
- Schneider Electric

SIG Participants as Invited Experts
Tom Burke, OPC Foundation ●
Peter Lutz, Sercos International ●

Strategic Plan
Initiative Machinery

SIG for Machinery Information Formed: Phase 1 Work is Machine-to-Supervisory Communications

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SIG Participants as Invited Experts
Tom Burke, OPC Foundation ●
Peter Lutz, Sercos International ●
Unified Integration Model for Machine Optimization

Alliance Partnerships
Technology Milestone
CIP Safety

10th Anniversary!
Technology Milestone
CIP Safety

10th Anniversary!

Established
Special Interest Group

2003
Technology Milestone
CIP Safety

10th Anniversary!

2003
Established
Special Interest Group

2005
Published
The CIP Safety™ Specification

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Technology Milestone

CIP Safety

10th Anniversary!

2003
Established
Special Interest Group

2005
Issued First
Declaration of Conformity
for DeviceNet™

2005
Published
The CIP Safety™ Specification
Technology Milestone
CIP Safety

10th Anniversary!

Adoption by Sercos Int’l

2003
Established Special Interest Group

2005
Published 1st Edition of The CIP Safety™ Specification

2005
Issued First Declaration of Conformity for DeviceNet™

2006
Adoption by Sercos Int’l

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Technology Milestone

CIP Safety 10th Anniversary!

2003

Established
Special Interest Group

2005

Published 1st Edition of

The CIP Safety™ Specification

2005

Issued First

Declaration of Conformity
for DeviceNet™

2006

Adoption by
Sercos Int’l

2007

Issued First

Declaration of Conformity
for EtherNet/IP™

2014 Industry Conference & 16th Annual Meeting

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Technology Milestone
CIP Safety

10th Anniversary!

- 2003: Established Special Interest Group
- 2005: Published First Edition of *The CIP Safety Specification*
- 2006: Issued First Declaration of Conformity for DeviceNet™
- 2007: Adoption by Sercos Int’l
- 2008: Published *The CIP Safety Specification* with CIP Safety on Sercos

*The CIP Safety Specification*
“Building on the existing collaboration between ODVA and Sercos International in functional safety, SI has agreed to participate with ODVA as an alliance partner in its Machinery Initiative. The cooperation with ODVA and the joint support of CIP Safety has created substantial technical and market synergies for the safety network community.” Peter Lutz, Managing Director of SI
2003
Established Special Interest Group

2005
Published 1st Edition of The CIP Safety™ Specification

2006
Issued First Declaration of Conformity for DeviceNet™
Adoption by Sercos Int’l

2007
Published The CIP Safety™ Specification with CIP Safety on Sercos

2008
Issued First Declaration of Conformity for EtherNet/IP™

2011
Announced The Machinery Initiative with OPC Foundation & Sercos International

2013
Established Conformance Testing for CIP Safety on Sercos III

2014
TSP NA
Established Special Interest Group 2003

Issued First Declaration of Conformity for DeviceNet™ 2005

Published 1st Edition of The CIP Safety™ Specification 2005

Issued First Declaration of Conformity for EtherNet/IP™ 2007

Adoption by Sercos Int’l 2006

Issued First Declaration Of Conformity for Sercos 2008

Issued First Declaration of Conformity for CIP Safety on Sercos 2011

Announced The Machinery Initiative with OPC Foundation & Sercos International 2013

Established Conformance Testing for CIP Safety on Sercos III 2013

Issued First Declaration of Conformity for Sercos III 2013

In total, 77 Declarations of Conformity have been issued for CIP Safety.

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2014 Industry Conference & 16th Annual Meeting

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Users will be able to deploy networked motion control systems using EtherNet/IP and Sercos III in applications requiring safe motion functions such as safe torque off and safety limited positions.
In total, **30 Vendors** have been authorized to date for CIP Safety.
2003
Established Special Interest Group

2005
Published 1st Edition of The CIP Safety™ Specification

2005
Issued First Declaration of Conformity for DeviceNet™

2006
Adoption by Sercos Int’l

2007
Published The CIP Safety™ Specification

2008
Issued First Declaration of Conformity for EtherNet/IP™

2011
Announced The Machinery Initiative with OPC Foundation & Sercos International

2013
Established Conformance Testing for CIP Safety on Sercos III

2013
To Publish in PC2 CIP Safety™ Spec w/Safe Motion

2013
Issued First Declaration of Conformity for Sercos III

2013
Announced The Machinery Initiative with OPC Foundation & Sercos International

2013
Established Conformance Testing for CIP Safety on Sercos III

2013
To Publish in PC2 CIP Safety™ Spec w/Safe Motion

2014
In total, 30 Vendors have been authorized to date for CIP Safety.

2014
• Test software subscriptions available for EtherNet/IP and Sercos III

... and more to come.
16th Term in Review
Report on Technical Activities of the Association
Rich Harwell, chief technology officer

General Session and 16th Annual Meeting of Members

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When riding the IP wave ...

... one should focus on keeping up.
Agenda

• Organization and process review

• Key deliverables since 15th general session

• Key work in process
Organization and Process Review

Strategic Initiatives

• Energy
• Machinery
• Process

Board of Directors and Officers

Technical Review Board

Technical Working Groups (SIGs+)

SIG Work Plans and Spec Enhancements
### Roster of Technical Working Groups

<table>
<thead>
<tr>
<th>No.</th>
<th>Working Group</th>
<th>Chair/Co-Chair(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SIG - CIP Safety</td>
<td>P. Kucharski, Rockwell Automation</td>
</tr>
<tr>
<td>2</td>
<td>SIG - CIP System Architecture</td>
<td>D. VanGompel, Rockwell Automation</td>
</tr>
<tr>
<td>3</td>
<td>SIG - CompoNet</td>
<td>T. Li, OMRON</td>
</tr>
<tr>
<td>4</td>
<td>SIG - Conformance</td>
<td>Q. Zeng, ODVA</td>
</tr>
<tr>
<td>5</td>
<td>SIG - DeviceNet of Things</td>
<td>T. Peter, Weidmüller Interface (acting)</td>
</tr>
<tr>
<td>6</td>
<td>SIG - DeviceNet Physical Layer</td>
<td>B. Woodman, Molex</td>
</tr>
<tr>
<td>7</td>
<td>SIG - Distribution Motion</td>
<td>S. Zuponcic, Rockwell Automation</td>
</tr>
<tr>
<td>8</td>
<td>SIG - Energy Applications</td>
<td>R. Blair, Schneider Electric/R. Morgan, Rockwell Automation</td>
</tr>
<tr>
<td>9</td>
<td>SIG - EtherNet/IP Infrastructure</td>
<td>B. LaRette, Schneider Electric</td>
</tr>
<tr>
<td>10</td>
<td>SIG - EtherNet/IP Physical Layer</td>
<td>R. Lounsbury, Rockwell Automation</td>
</tr>
<tr>
<td>11</td>
<td>SIG - EtherNet/IP System Architecture</td>
<td>B. Batke, Rockwell Automation</td>
</tr>
<tr>
<td>12</td>
<td>SIG - Integration of I/O-Link</td>
<td>F. Moritz, SICK</td>
</tr>
<tr>
<td>13</td>
<td>SIG - Integration of Modbus</td>
<td>T. Snide, Schneider Electric</td>
</tr>
<tr>
<td>14</td>
<td>SIG - Machinery Information</td>
<td>R. Beudert, Schneider Electric/L. Leurs, Bosch Rexroth/S. Zuponcic, Rockwell Automation</td>
</tr>
<tr>
<td>15</td>
<td>SIG - Vertical Industry Semiconductor</td>
<td>open, election of successor pending</td>
</tr>
<tr>
<td>16</td>
<td>Workshop - EtherNet/IP Implementors EU</td>
<td>Ulrich Kaemmerer, Schneider Electric</td>
</tr>
<tr>
<td>17</td>
<td>Workshop - EtherNet/IP Implementors NA</td>
<td>Kevin Knake, HMS Industrial Networks</td>
</tr>
</tbody>
</table>

Thanks to the chairs for their organization and leadership on behalf of the greater ODVA community and technology!
Make-up of the Technical Review Board (TRB)

1. Chair Rich Harwell (ODVA chief technology officer, employee of Eaton)
2. Representative Rudy Belliardi (employee of Schneider Electric)
3. Representative Paul Didier (employee of Cisco Systems)
4. Representative Jörg Hähnische (employee of Endress+Hauser)
5. Representative Rich Jackson (employee of Omron)
6. Representative Oliver Kleineberg (employee of Belden)
7. Representative Ludwig Leurs (employee of Bosch Rexroth)
8. Representative Eric Scott (employee of Molex)
9. Representative Dave VanGompel (employee of Rockwell Automation)

Meeting at least 2X per month, the TRB is responsible for approval of all work plans for ODVA’s technical working groups, providing technical guidance to SIGs in their development of specification enhancements (SEs) and approval of SEs for integration into ODVA’s specifications.
ODVA Technology

The Common Industrial Protocol and its Network Adaptations (ODVA Specifications)

Contributors
- Technical Working Groups
- TRB
- ODVA staff

ODVA Conformance Testing Practice
(test plans, testware, administration, documentation, know how)

Technical Publications
(recommendations, guidelines)
Deliverable Highlights

3 publication cycles since last meeting

69 Specification Enhancements

Highlights include:

- Safety Motion Objects
- First Cyber Security Related Updates
- IPv6 Plan (Pre-SE)
- Parallel Redundancy Protocol – PRP
- Energy Extensions
- File Object Enhancements
- EtherNet/IP CT11, DeviceNet CT25
Major Work In Process

Highlights of work in progress in SIGs

- **EtherNet/IP System Architecture** – Accommodation plan for implementation of IPv6, enhancements for cyber security
- **IO-Link Integration** – enhancements to Volume 7
- **DeviceNet of Things** – Phase 1: initial enhancements to The CIP Networks Library (primarily in Volumes 1 and 3)
- **Process Initiative** – rationalization of proposed technical work, formation of new SIG
- **Energy Applications** – Phase 3: transacting energy for the best result
- **EtherNet/IP Physical Layer** – Volume 3, Chapter 8, rewrite with industrial 1G PMD interfaces
- **Machinery Information** – Phase 1: data model for logical groupings and then map the model into CIP objects and services to support exchange of the information between machines and supervisory systems
- **CIP Motion** – enhancements to support machine-to-machine synchronization
Candidates for Election

General Session and 16th Annual Meeting of Members

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## Nominations

<table>
<thead>
<tr>
<th>Board of Directors</th>
<th>Board of Directors</th>
<th>Representative to the TRB</th>
<th>Representative to the TRB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Michael Höing</strong></td>
<td><strong>Kent Howard</strong></td>
<td><strong>Eric Scott</strong></td>
<td><strong>Joakim Wiberg</strong></td>
</tr>
<tr>
<td>Weidmüller Interface</td>
<td>Balluff</td>
<td>Molex</td>
<td>HMS Industrial Networks</td>
</tr>
</tbody>
</table>

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17th Term

Looking Ahead

General Session and 16th Annual Meeting of Members

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The Company Officers

- Katherine Voss, President & Executive Director
- Rich Harwell, Chief Technology Officer
- Christopher Lynch, Secretary
- Jürgen Weinhofer, Treasurer
The Company

Technical Review Board (TRB)

1. Chair Rich Harwell (ODVA chief technology officer, employee of Eaton)
2. Representative Rudy Belliardi (employee of Schneider Electric)
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