

ROS-Industrial Origins and Vision

4 March 2020

Shaun Edwards and Paul Hvass



ROS-Industrial Consortium Americas
2020 Annual Meeting

Origin Story

- Willow Garage releases ROS 1.0 (January 2010)
- Initial use of ROS at SwRI (March 2010)
- Shaun starts as a visiting researcher at Willow Garage (October 2011)

```
commit e9494d21f5e5a6d951e7534f1c9c088236dcad69
Author: sedwards@willowgarage.com <sedwards@willowgarage.com@076cdf4d-ed99-c8c1-5d01-9bc0d27e81bd>
Date:   Fri Sep 23 02:12:56 2011 +0000
```

```
Check in of initial directory structure. sia20d robot urdf committed with primitives.
```

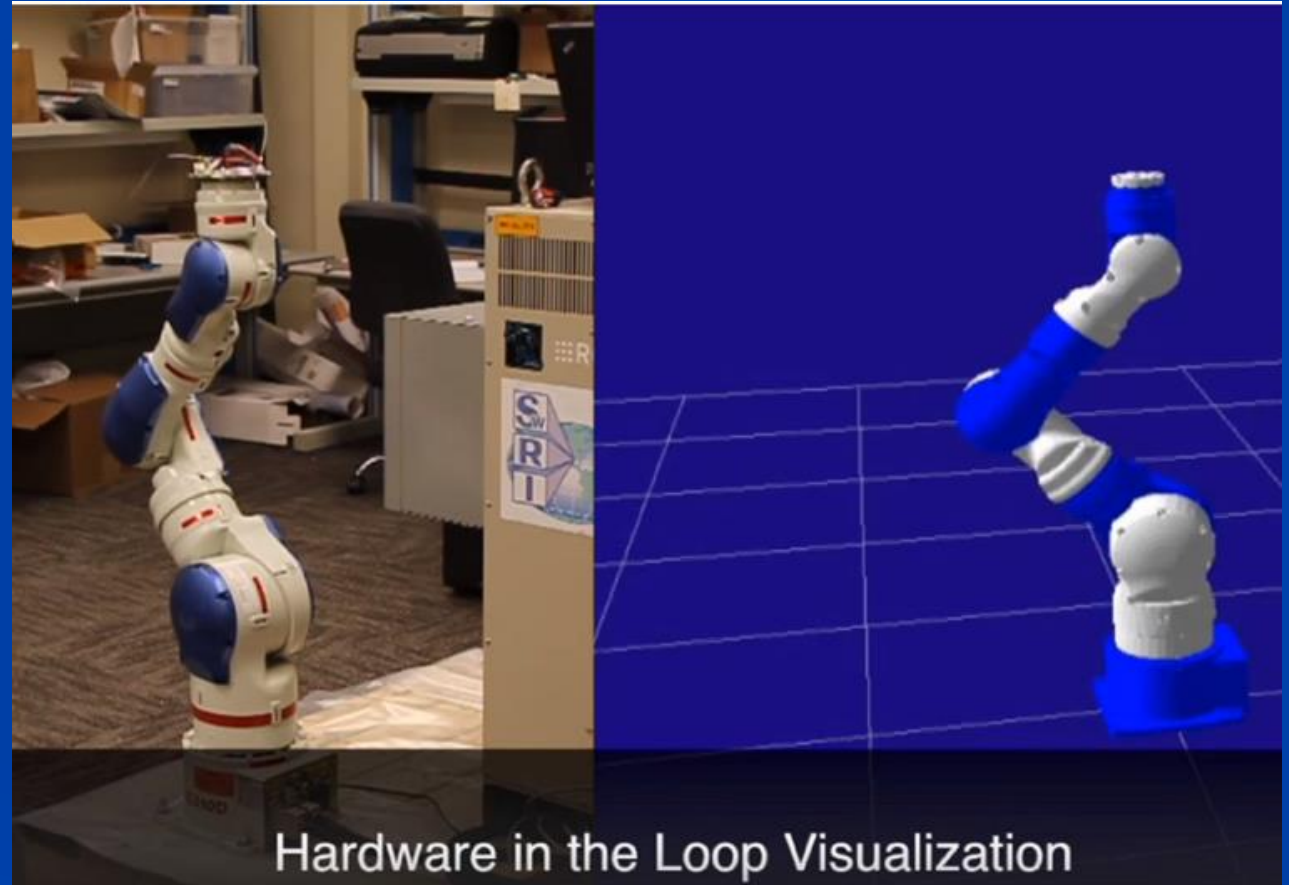
- First robot (Motoman) under ROS-Industrial control (December 2011)
- Second robot (Adept) under ROS-Industrial control (January 2012)
- ROS-Industrial Consortium Kickoff (March 2013)

Origin Story

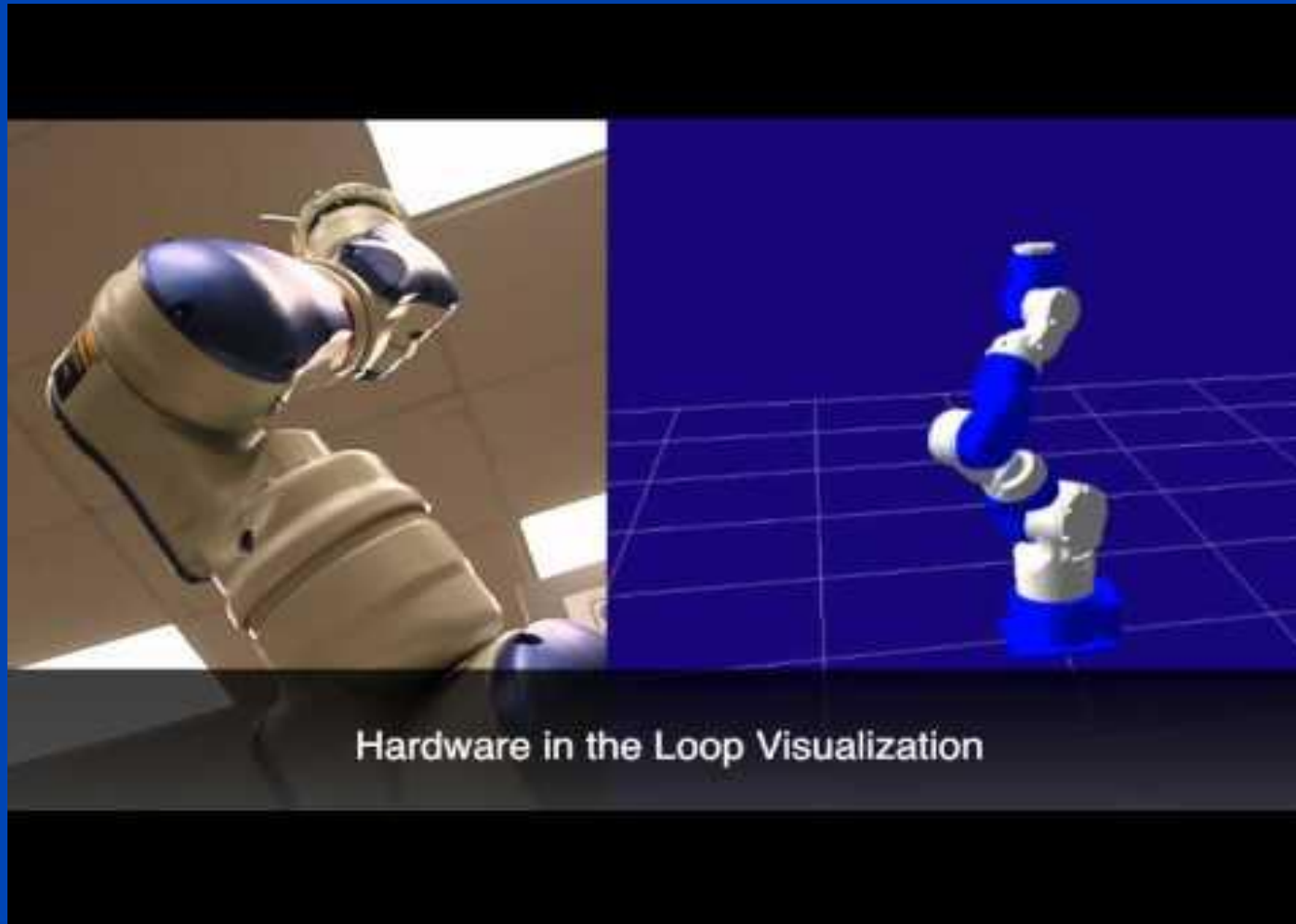


ROS Industrial

Shaun Edwards, Guest Researcher



Origin Story



What We Thought in the Beginning:

Right

- Broad exposure to the research robotics community by association with ROS
- Source of a disruptive technology in the industrial robotics market
- Core ROS quality matches or exceeds that of industrial software



Wrong

- ROS was not original and would suffer the same fate other efforts and eventually fail or be supplanted
- Industrial companies would follow the lead of tech companies in their adoption of open source

Why Start a Consortium?

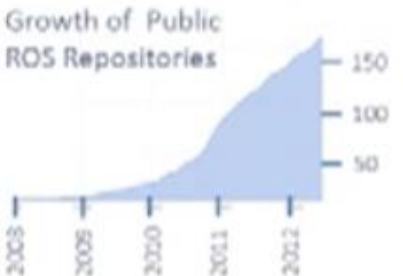


RIC Kickoff Meeting, March 2013

 Why start a Consortium? 


- Support ROS-Industrial:
 - Organize the community
 - Add functionality to ROS-I
 - Provide technical support
 - Provide training
 - Test with industrial hardware
 - Grow the community
 - Emulate Willow Garage

Growth of Public ROS Repositories




Ref: ROS Community Metrics Report July 2012
<http://wiki.ros.org/Industrial/Consortium/CommunityMetrics>








- July 2012 ROS Stats:
 - ROS Wiki Users: 2015
 - Wiki Edits/day: 47.4
 - ROS Answers Users: 2761
 - Wiki pg. views/day: 24,559
 - Unique IP .deb downloads: 8,189

6 March 2013 

Managed by: Southwest Research Institute

Paul Hvass - SwRI
RIC Program Manager

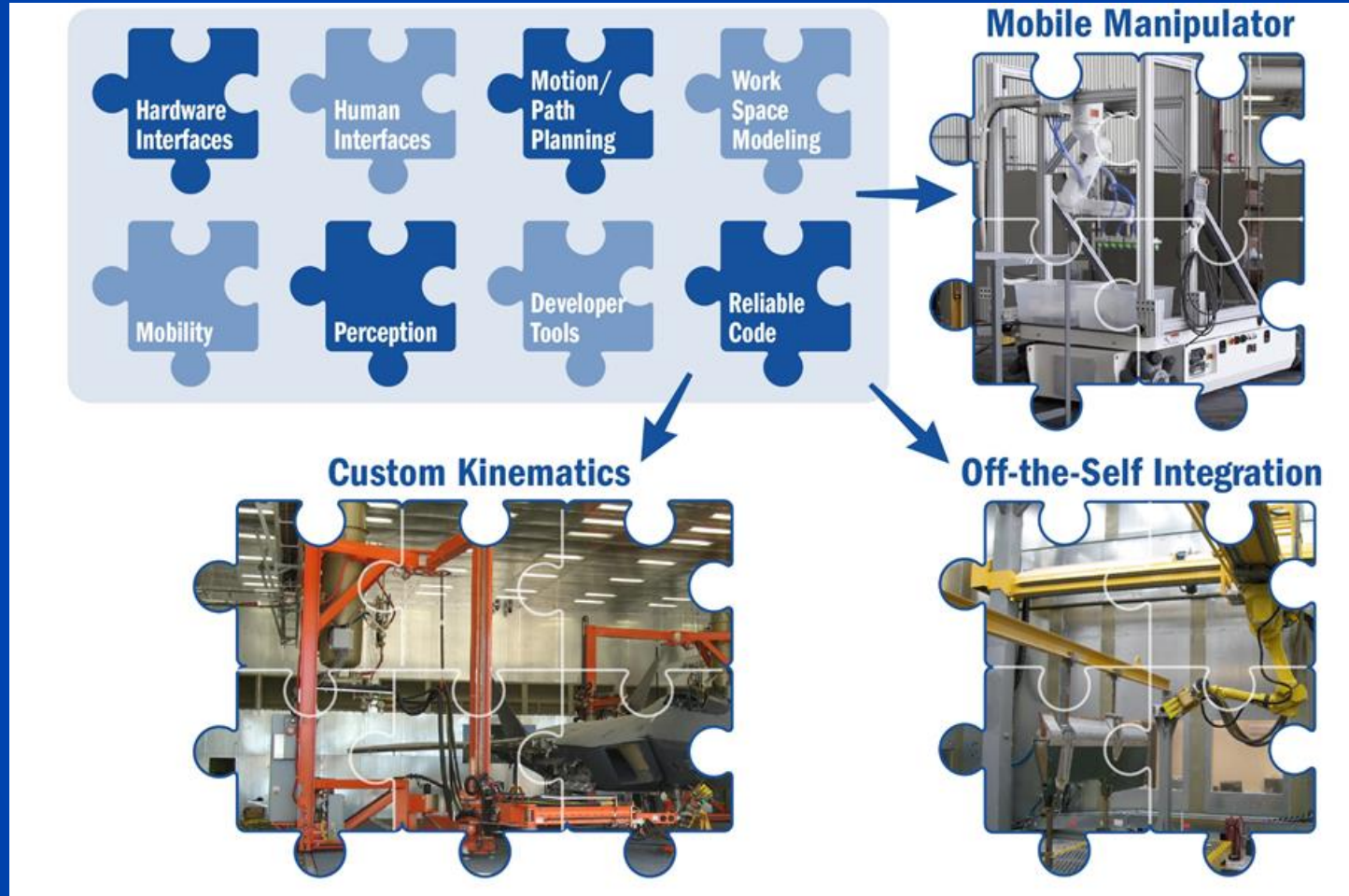
 ROS[®] industrial #rica2020

 1:45 / 25:48      

Organize the Community



Add Functionality to ROS-I



- 66 ROS-I Repos
- 26 Consortium Repos

Grow the Community



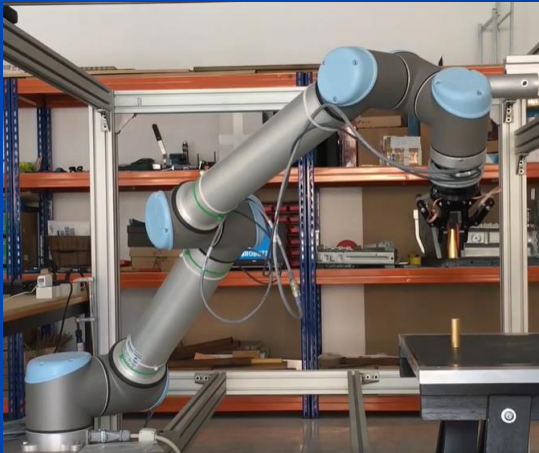
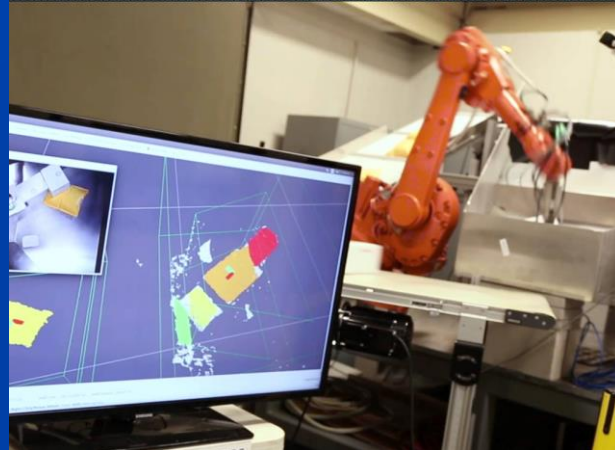
2014 Members



2020 Members



Impact: Advanced Robotics for Industry

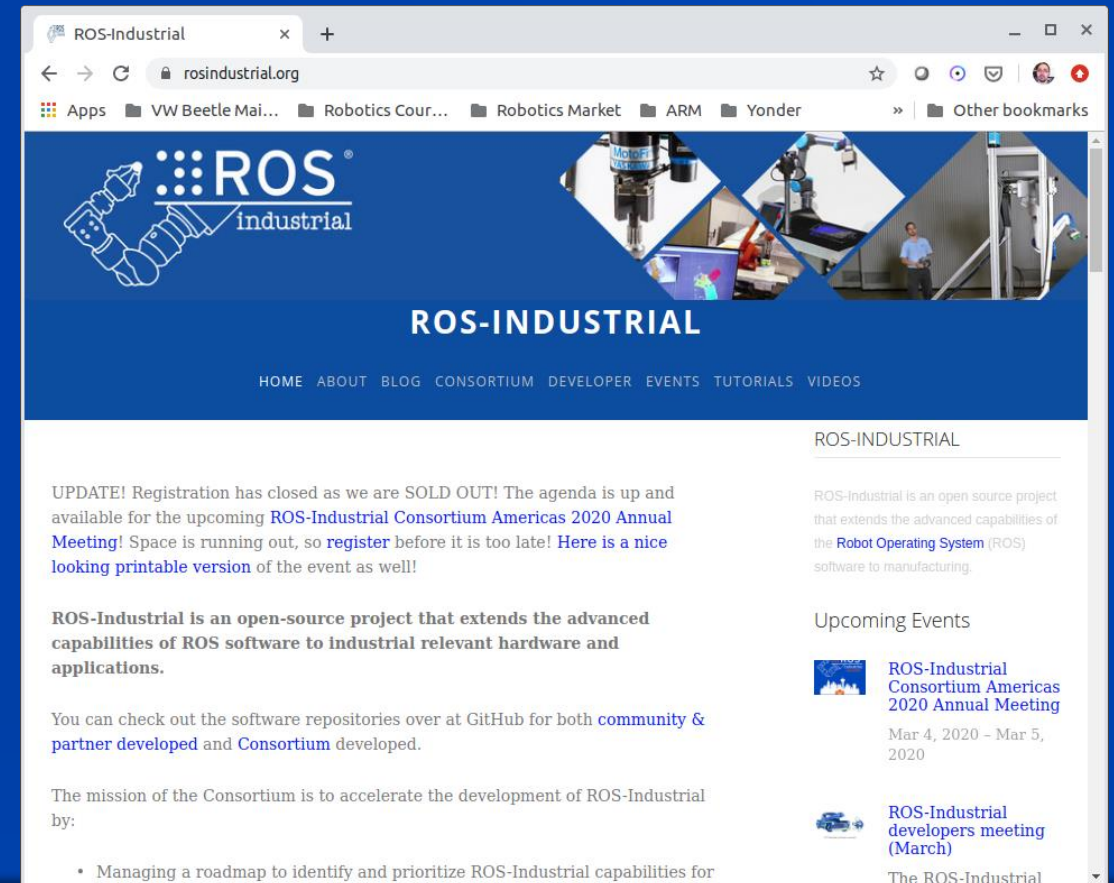


Future



ROS-Industrial Software Package?

- Where's the "Download" button
- Lots capabilities, but no packaging
- ROS-Industrial as a Product
 - Documentation
 - Demos
 - Support
 - Frontends
 - Training



Open Source Manufacturing Organization

- Organization in support of open source software for manufacturing (not just robotics)
- Financial support to host, organize, and incubate software
- Manufacturing functions: ERP, MRP, CAD, PLM, etc
- Automation functions: CAM, PLCs, CNCs, SCADA, etc.
- IP holding organization



Questions?

