ROS-Industrial:
An Open Source Case Study

Shaun Edwards

Senior Research Engineer

Southwest Research Institute

Presentation Goals

- Motivate others to start open source efforts/programs that build on or are related to ROS

- Encourage developers to actively participate

Agenda

- Emergence of multiple programs out of the ROS community

- ROS-Industrial: case study

- Importance of these programs

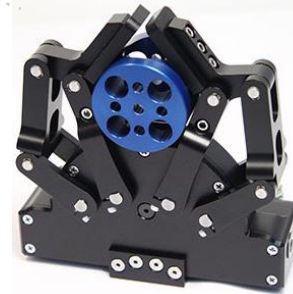- Conclusions

Emergence of Programs

- ROS' greatest strength is community

- Programs are larger than a single package, organized, and maintained

- Most are technology focused, ROS-Industrial is market focused

- Sampling of programs
  - SIGs
  - Webtools
  - MoveIt
  - PCL
  - Ecto
  - ROS-Industrial
  - Embedded
  - More (I want to know about them)

ROS Industrial Case Study

Background

- ROS-Industrial program aims to leverage ROS for industrial applications

- Primary objectives:
  - Developing technology (software)
  - Creating a community of researchers and developers
  - Engage robotics and automation industry

- More detailed info: http://www.youtube.com/channel/UCXyGVRiCwUMc1gav-G7z2ew

One Year Video

- http://www.youtube.com/watch?v=Ek8GKqmJ7n0&feature=youtu.be

Benefits to SwRI

- Increased name recognition in the area of industrial automation R&D

- Dozens of new contacts (potential clients and collaborators around the world)

- Several R&D project awards

- Initiation of the ROS-Industrial Consortium (potential for more funded R&D)

- European ROS-Industrial effort led by Fraunhofer IPA

- Attracting top talent

Recipe for Success

- Inception
- Build it
- Brand it
- Promote early
- Document it
- Get others involved
- Fund it
- Benefit

Importance of Programs

- Establish multiple lines of support for a package (capability)

- Provide concrete/tangible opportunities for investment (especially market focused projects)

- Program needs can drive core ROS development

- Forces collaborators to consider broader applications

Conclusions

- Everyone should consider starting/joining a program (especially market focused programs)
  - Autonomous vehicles
  - Micro air vehicles
  - Medical robotics
- Programs can benefit the participants and the community
- All programs should work harder encourage greater involvement of all participants

Contact Information

Shaun Edwards

Senior Research Engineer

Southwest Research Institute

6220 Culebra Rd.
San Antonio, TX 78251
US

Phone: 210-522-3277
Email: sedwards@swri.org

www.rosindustrial.org

www.ros.org/wiki/Industrial