What is ROS?

- Build and packaging system
  - organize and maintain large projects
  - “Robot Filesystem”
  - debugging and visualization tools
What is ROS?

- Build and packaging system
- Inter-process communication middleware
  - publish-subscribe
  - allows multiple languages
    - C++, Python supported from Day 1
    - community support: JS, Lisp, etc.
  - “Robot Computation Graph”
What is ROS?

- Build and packaging system
- Inter-process communication middleware
- Community
  - Huge collection of software, algorithms, robot capabilities, hardware drivers, etc.
  - Documentation, mailing lists, knowledge repositories, events, etc.
What ROS is not?

- **Not** a computer Operating System
  - Ubuntu Linux officially supported

- **Not** any one package, program, website, etc.
  - 100s of repos and 1000s of packages
Getting Started

Go to http://www.ros.org/wiki

- Installation of core ROS tools
- “Getting Started” tutorials
Examples

- Installation from debian release
- Command line tools
- Package creation and dependencies
- `rosmake`
- ROS Master and `roscore`
- Publish and subscribe
- Topics and Actions
What does Willow Garage do?

- Build and maintain core ROS tools
- Contribute to collection of robot software
- Open documentation ([www.ros.org/wiki](http://www.ros.org/wiki)) and Q&A ([answers.ros.org](http://answers.ros.org)) websites
- Release standardized distributions every 6 months
  - collection guaranteed to run together
  - current: ROS Fuerte
  - coming soon: ROS Groovy
What does Willow Garage **not** do?

- We do **not** write, maintain, or own “all” of ROS
  - community effort
- We do **not** “approve” ROS packages or apps
  - there is no approval process
What license is ROS?

- Core ROS tools are under BSD license
  - allows use in commercial applications
- Most Willow Garage contributions are also BSD
- Community contributions: up to owners