

DASL 107 Introduction to ROS

Week 1



Agenda

- Review Syllabus
- What is ROS
- What software to use for the class
- What kind of workload to expect

Syllabus

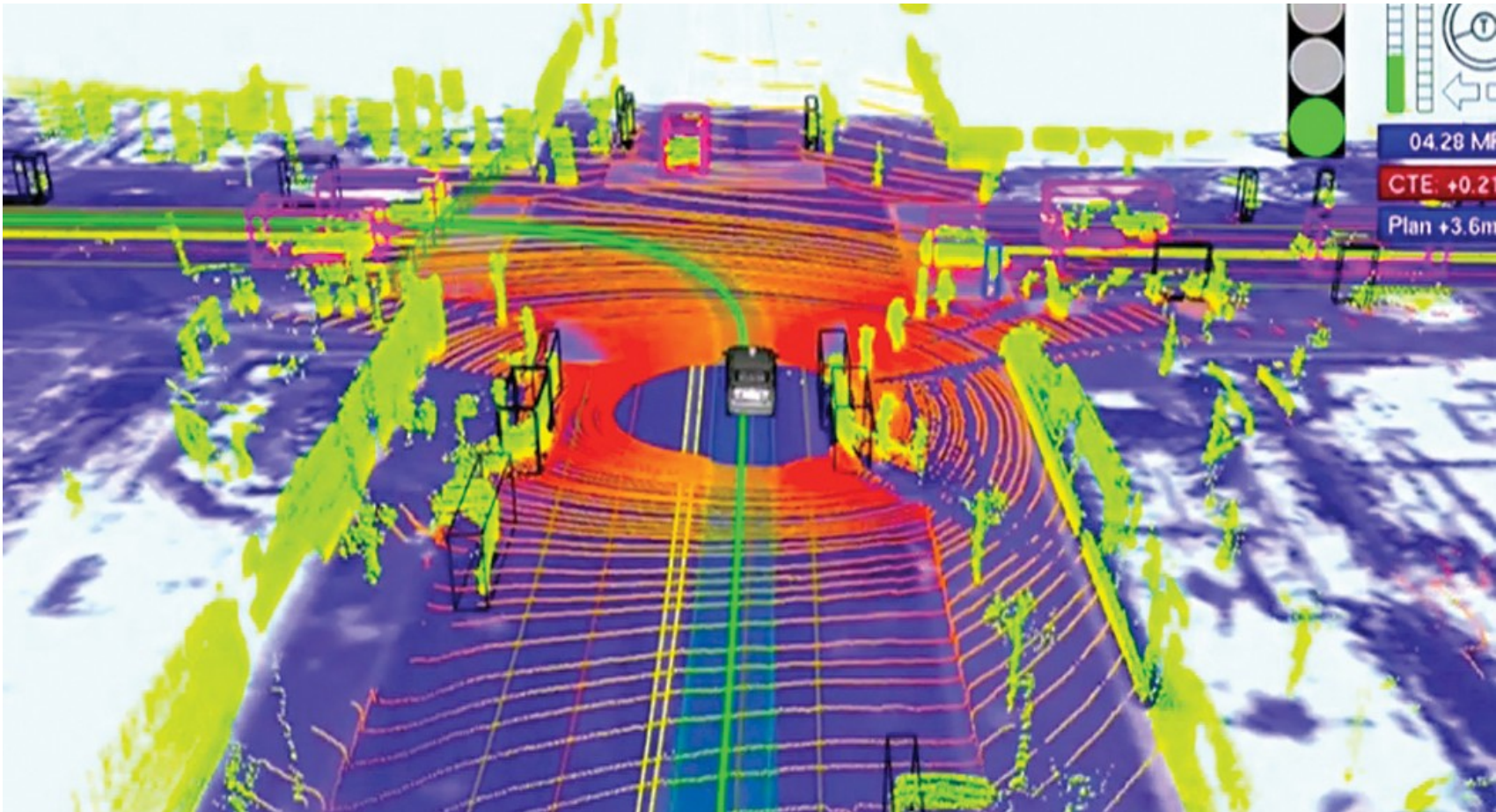
- <http://www.daslab.org/unlv/wiki/lib/exe/fetch.php?media=courses:ros:ros-syllabus.pdf>

What is ROS?

- Robot Operating System
 - Communication Middleware Layer



What is ROS?



What is ROS?

- 2007 Stanford Artificial Intelligence Lab
 - Switchyard
 - STAIR robot
- 2008 Willow Garage
- 2013 Open Source Robotics Foundation (OSRF)



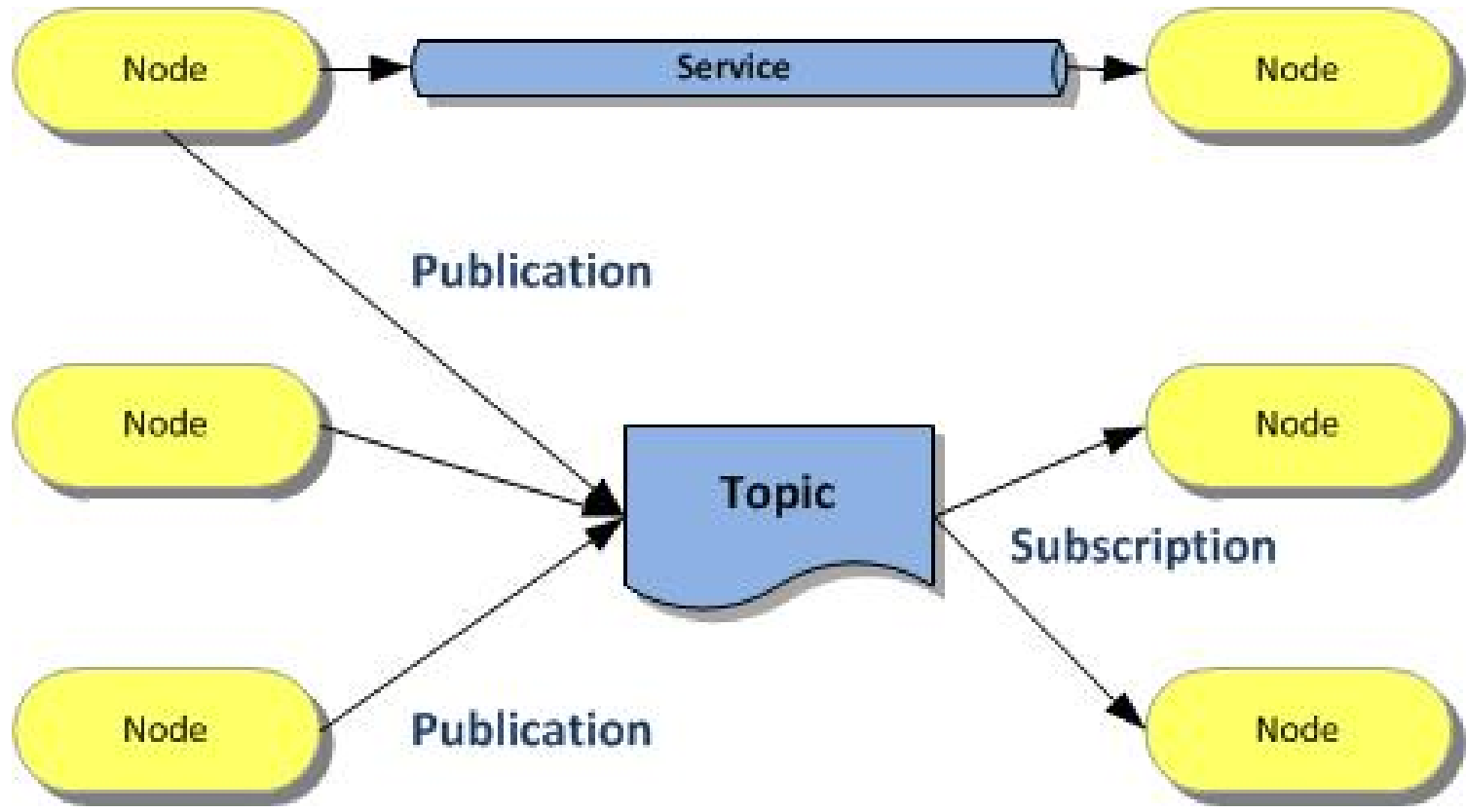
What is ROS?

- Distributions
 - ROS 1.0
 - http://wiki.ros.org/Distributions#List_of_Distributions
 - ROS 2.0
 - ROS-I (Industry)
 - Etc.

What is ROS?

- Structure
 - Nodes
 - Messages
 - Topics
 - Services

What is ROS?



What Software?

- OS
 - Ubuntu 16.04 LTS
- Text Editor
 - Vim, Emacs, Atom, Gedit, Clion, Pycharm, etc...
- Github
- ROS
 - Kinetic Kame



What to Expect?

- Focus is on out of class hw
- Students are expected to spend at least 4 hrs a week on course material
- Students are free to use online material for help but are not allowed to ctrl-c ctrl-v.
- Questions?

HW

- Install Ubuntu 16.04 on your computer
- Install ROS-Kinetic
- Setup Github account and push hello world file
- Decide on a text editor
- Finish ROS beginner tutorial #1

HW

- Helpful links
 - Installing Ubuntu
 - <https://www.lifewire.com/beginners-guide-to-ubuntu-2205722>
 - Navigating Ubuntu terminal
 - File & Directory Commands
 - <https://help.ubuntu.com/community/UsingTheTerminal>
 - ROS Installation
 - <http://wiki.ros.org/kinetic/Installation>
 - ROS Tutorial
 - <http://wiki.ros.org/ROS/Tutorials>