

Table of Contents

Kinect.....	2
1. Development choices	2
2. Kinect Specs.....	2

Welcome

Project Willy

- [History of Willy](#)
- [Project Willy](#)
- [Publicity](#)
- [Sponsors](#)

Getting started

- [Introduction to ROS](#)
- [Development Guide](#)
- [Driving Willy](#)
- [Manual](#)
- [Wiki Manual](#)

Build of Willy

- [Design history](#)
- [Hardware](#)

Architecture

- [Software Architecture](#)
- [ROS topic design](#)

Raspberry Pi's

- [Sensor node](#)
- [Social Interaction node](#)
- [Power node](#)

Components

- [ROS master](#)
- [New ROS master on Lubuntu](#)
- [Sonar](#)
- [Lidar](#)
- [Kinect](#)
- [Localization and navigation](#)

- [Motor controller](#)
- [Joystick](#)

Lessons learned

- [Todo & Advice](#)
- [Lessons Learned](#)

Archive

- [Previous Groups](#)
- [Research Archive](#)
- [Skylab Architecture](#)
- [Skylab](#)
- [Multi master](#)
- [WillyWRT](#)
- [Realisation](#)
- [Hardware](#)
- [Brain](#)
- [Design Guild](#)
- [Social interaction](#)
- [Speech](#)
- [Speech recognition](#)
- [IMU](#)
- [Human Detection](#)
- [Radeffect App](#)

Kinect

1. Development choices

When analysing Willy the group of 2019 Semester 1 came to the conclusion that there were problems with Willy detecting objects at certain heights. To come up with a solution the group researched different sensors to find the right one for object detection on certain heights. As a result the Kinect was chosen as it suited the needs and was available to use.

2. Kinect Specs

The version of the Kinect is version 1. That is because it was available to use and meant no delays in the project while waiting for the product to arrive. In the future it might be a good idea to upgrade to a Kinect 2 as the Kinect 2 has better specs.

Feature	Kinect 1
Color Camera	640 x 480 @30 fps
Depth Camera	320 x 240
Max Depth Distance	apr. 4.5 m
Min Depth Distance	40 cm in near mode
Depth Horizontal Field of View	57 degrees
Depth Vertical Field of View	43 degrees
Tilt Motor	Yes
Skeleton Joints Defined	20 joints
Full Skeletons Tracked	2
USB Standard	2.0