Table of Contents

• Motor controller

• Joystick

Tuble of Contents
1. Radeffect App
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

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

1. Radeffect App

Together with another group of Windesheim students an app was developed for Willy. The app is developed in Mendix. The application can be found here: https://callwilly-sandbox.mxapps.io/ The main function of the app is to call Willy over. This is done by:

Post:

- Retrieving from Willy topics the location (AprilTag number) and activity
- Converting the ArpilTag number to the classroom number
- Publishing the location (classroom number) and activity of Willy in Json format to the Mendix App site

Get:

- Retrieving the designated location (classroom number) when a visitor calls for Willy in Json format from the Mendix app site
- Converting the classroom number to AprilTag number

• Publishing the AprilTag number on a Willy topic

The activities are done in two Python scripts published here: https://github.com/Windesheim-Willy/Skylab/blob/master/Fetcher/Skylab_app_get_status_0.py and https://github.com/Windesheim-Willy/Skylab/blob/master/Fetcher/Skylab_app_post_status_0.py

For test purposes a test script is created to publish every 10 seconds a new location and activity so the app can work without Willy being active. The script is published here: https://github.com/Windesheim-Willy/Skylab/blob/master/Fetcher/Test_script_for_RADeffect.py

The scripts for Radeffect connectivity are run on the Fetcher in Skylab.

A backup of the Mendix code is stored on SharePoint at the map "Winnie App".