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Welcome

Project Willy

- History of Willy
- Project Willy
- Publicity
- Sponsors

Getting started

- Development Guide
- Driving Willy
- Documentation

Build of Willy

- Design history
- Requirements
- Design reference
- Physical build
- Hardware

Robotic Operating System

- Introduction to ROS
- ROS Tutorials
- Multi master

Architecture

- Software Architecture
- Hardware Architecture
- Skylab Architecture
- ROS topic design

Hardware nodes

- sensor node
- si node
- power node
- WillyWRT

Components

- ROS master
- New ROS master on Lubuntu
- Brain

- Sonar
- Lidar
- Localization and navigation
- Motor controller
- Joystick
- Social interaction
- Speech
- Speech recognition

Skylab

- Setup Skylab
- Python scripts
- Webserver
- Functions of the webserver
- Skylab servers
- ROS installation on Ubuntu VMs in Skylab
- DNS,DHCP, pfSense & Ubuntu

Radeffect App

- Radeffect App

Lessons learned

- Todo & Advice
- Lessons Learned

Archive

- Previous Groups
- Research Archive

1. Realisation

1.1. Steel work

1.1.1. Frame



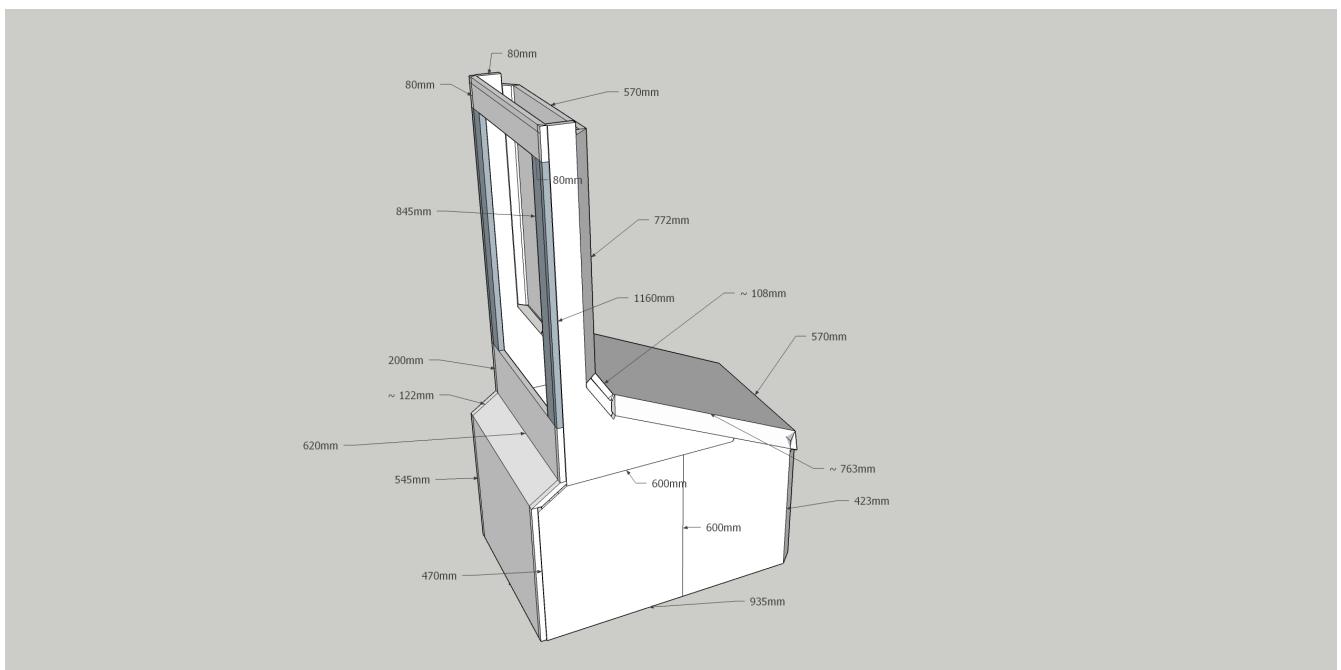
1.1.2. Mounting



1.1.3. Bumper preparation



1.2. Mold



1.2.1. Wooden frame





1.2.2. Styrofoam board









1.3. Polyester work

We used the workshop of Koers Polyester Techniek in Nieuwleusen.
<http://koerspolyestertechniek.nl/>



The mold is covered with glass fiber and polyester resin. Starting with one base layer with a 225 gr/m² and following with four layers of 600 gr/m².

1.3.1. Preparation





1.3.2. Polyestering







1.3.3. Sanding/Sawing/Filling





1.4. Cooling

Cooling is done by 9 140mm fans in sets of 3 across the robot, at every arrow a set can be found. We have not yet found a sponsor for fans after many tries.

