



IntelChair

Project in Informatics Engineering 2018/2019

Mid Semester Presentation

Group 7

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Context

In a working environment people need to move from place to place

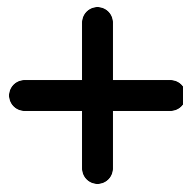


While doing so, they waste time and energy

IntelChair



Motorized Wheelchair



Laptop



RGBD Camera

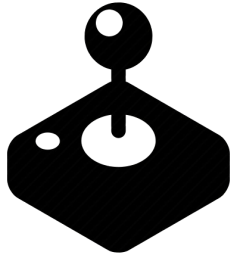


Laser Rangefinder



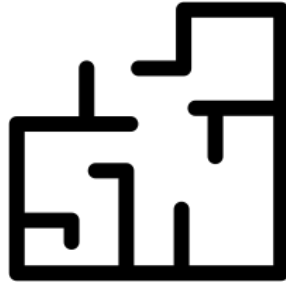
Inertial Motion Unit

Main Features



Manual Control

Through a joystick in the Mobile Application



Room Mapping

With all available sensors



Navigation

With a generated map and the sensors

Extra Features



Voice Control

Through the Mobile Application



Follow User

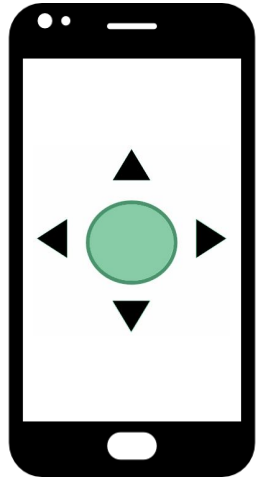
Using the camera in the front



Object Avoidance

Avoid objects that are not present
in the map

How it works



Smartphone
Mobile Application for the user

IntelChair



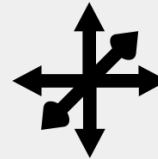
Laptop
Links all system nodes



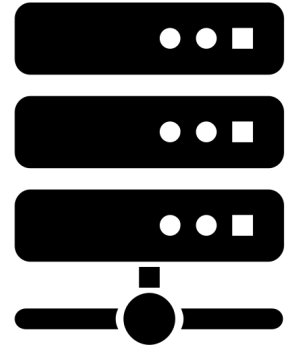
Rangefinder
Room Mapping



Kinect
Object Detection



IMU
Odometry Generation



Server
User access and Map management

How it looks





DEMO

Manual Control



Real Scenario

