ROS UTILISATION AS A COMPONENT IN AGV APPLICATIONS

FIIF Event: Robot Operating System (Thursday, September 22, 2022 at 9:00-12:30)

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VP Engineering

Navitec Systems Oy
Vanha Maantie 1
02650 Espoo, Finland

www.navitecsystems.com

Navitec Systems – 1998 to 2022

- Privately held. Focus on OEM market
- Entered material-handling market in 2013 with major success
- Engineering company, technology leader

Navitec Systems – 1998 to 2022

1998

Navitec was founded.
Market leader in natural feature navigation in the mining industry.

2004

First natural feature navigation system delivered to Chile

2008

Nuclear Waste AGV with Natural Feature Navigation.
Swedish national nuclear depository.

Navitec Systems – 1998 to 2022

2013

Finnish engineering award

2014

Complete software solution for material-handling AGVs systems

2020

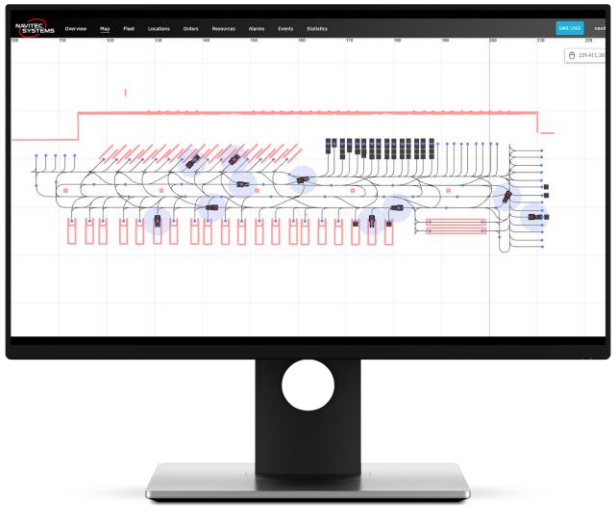
Fastest growing company award by Deloitte

Navitec Systems – 1998 to 2022

2021

New office in Germany, Hamburg

2022



Complete automation system
for multiple vehicles with WMS integration,
VDA 5050, new Fleet Control.

Navitec Systems – 1998 to 2022

Now: 45 employees, all engineers
Growing fast

Headquarter in Espoo, Finland (near Helsinki)

Distributors in South-Korea, Japan, Malaysia, Philippines, Singapore, Thailand, Vietnam and Turkey

Sales office in Oldsmar, Florida, USA

Wholly owned subsidiary in Hamburg, Germany

NAVITEC SYSTEMS

CUSTOMERS AGVs

NAVITEC SYSTEMS

CUSTOMERS AGVs

CUSTOMERS AGVs

CUSTOMERS AGVs

CUSTOMER AGV VIDEOS – QUICK OVERVIEW

NAVITROL NAVIGATION

POSITIONING AND VEHICLE CONTROLS

POSITIONING

- Natural feature navigation
- No reflectors needed
- Minimal amount of natural features required for stable navigation

Sensor fusion

- 2D laser
- IMU
- Differential GPS
- 3D laser
- Radar
- 2D and 3D camera
- Full Dynamic Mapping
- Indoor and full outdoor navigation

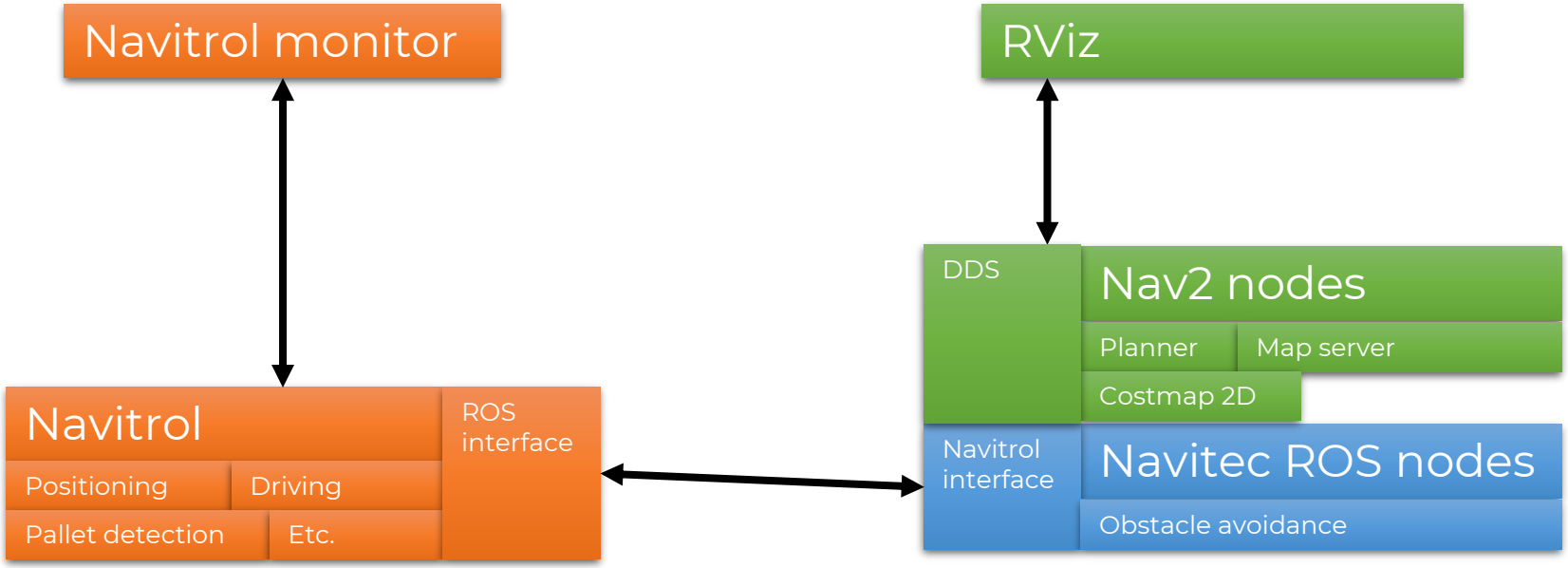
VEHICLE CONTROLS

- Any type of vehicle and wheel geometry
- Fully configurable
- Hardware independent
- Open architecture

Special functionalities

- Driving in formation
- Synchronized driving
- Automated load station & docking station detection
- Racking
- Block-stacking
- Pallet detection
- Obstacle avoidance

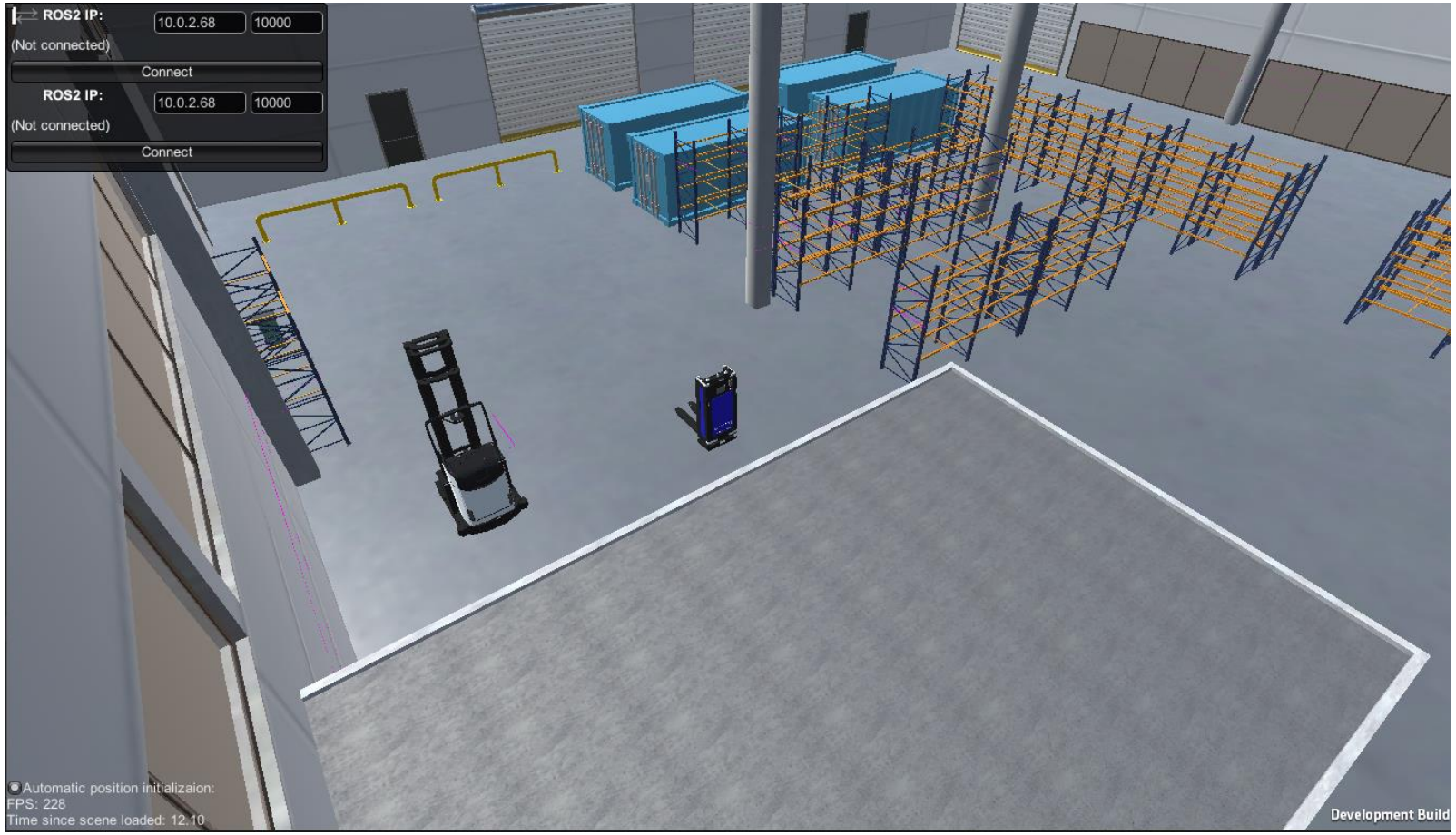
ARCHITECTURE



NAVITEC SYSTEMS

ROS2 BASED OBSTACLE AVOIDANCE

PEAMS INDOOR DEMO



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