



MB Dukubu

Company Presentation

## Vision

To become worldwide recognized hi-tech company, that integrates cutting edge products and technologies to create small automation and robotics products for everyone.

## Mission

We create and deliver best user-friendly and high quality small automation and robotics products for everyone.

We constantly try to improve, be flexible, happy and sincere about what we do, and make big things simple.

We believe that consumption and mass-production must be challenged by quality, longevity, simplicity and efficiency, we believe that technologies have to be personalized.

## Values

Innovation and creativity.

Respect to human-being, society and nature.

Honesty and responsibility.

# Team



Tadas Sperauskas, CEO

Education:

- KTU, MSc (electrical engineering);
- Uni Bremen, MSc (Information and Automation Engineering).

Experience:

- Siemens, engineer and PM, 2007-2014 m.;
- Dukubu, CEO, 2013-...

Fields:

- Traffic control systems;
- ER20CF locomotive service;
- mechatronics system design, prototyping and manufacturing;
- management.



Saulius Bartkevičius, Engineer

Education:

- VGTU, MSc (electrical and electronics engineering);
- „Postgraduate“ studies, FH Stralsund ir TU Braunschweig;
- VGTU, PhD (electrical and electronics engineering).

Experience:

- Siemens, engineer and PM, 2005-2014 m.;
- Dukubu, engineer, 2013-...

Fields:

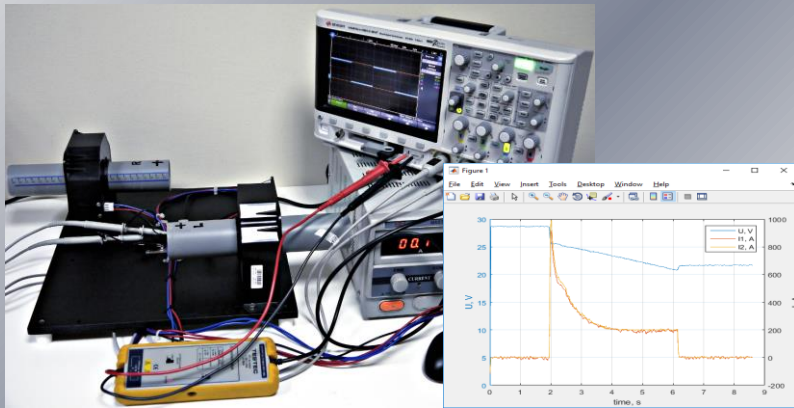
- Industrial devices and their control;
- Traffic control systems;
- ER20CF locomotive service;
- mechatronics system design, prototyping and manufacturing.

## Areas of Activity

- traffic engineering, system commissioning&service;
- design and production of traffic control system elements (HW+SW);
- locomotive spare-part production;
- rolling-stock control&monitoring system design & production;
- precision machinery (jewelry, engraving, milling);
- micro-automation and drives, positioning & stabilization devices;
- electrical engineering and electronics part design & production;
- mechatronics system design & simulation;
- FEM analysis.

# Projects I

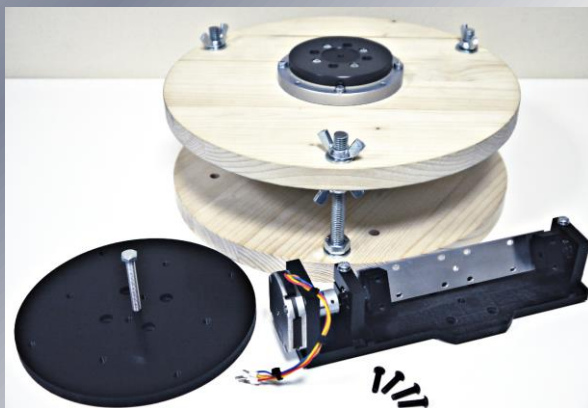
Locomotive Siemens ER20CF ultra-capacitor aging test-bench (HW+SW)



LitSat-2 satellite part production (HW)



LitSat-2 satellite magneto-sensor and sun-direction-sensor test bench (HW)

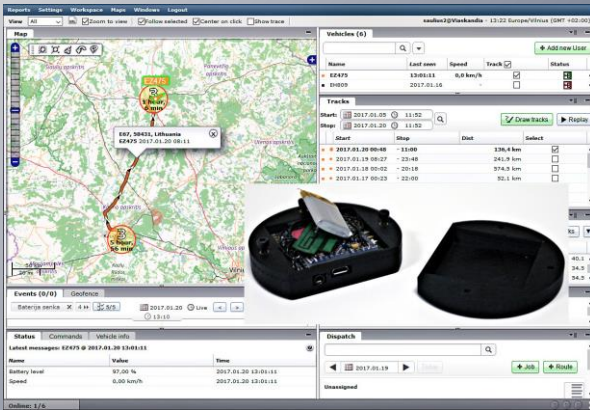


Data readers for listening devices (bugs) in use (HW)



# Projects II

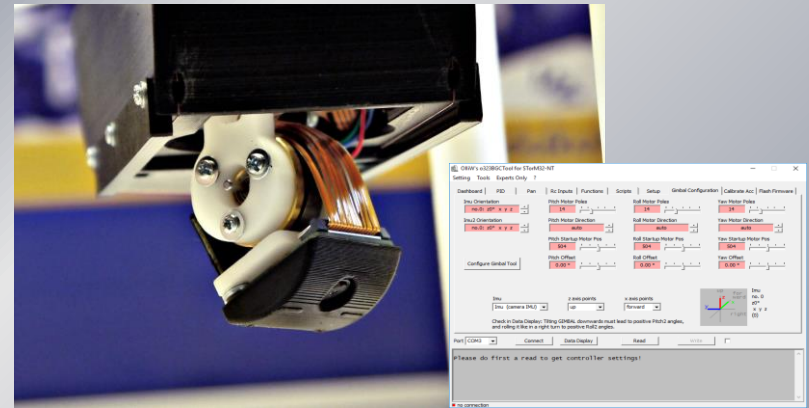
Trailer monitoring devices (HW+SW)



Automated slides for filming and time-lapse (HW+App)



Fixed-wing UAV Roll-Pitch-Yaw micro-camera stabilization set (HW+SW)



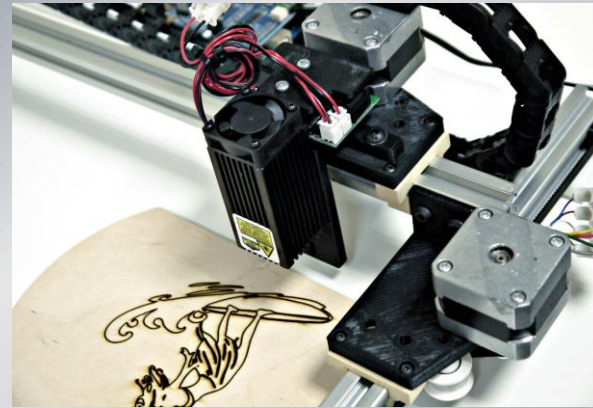
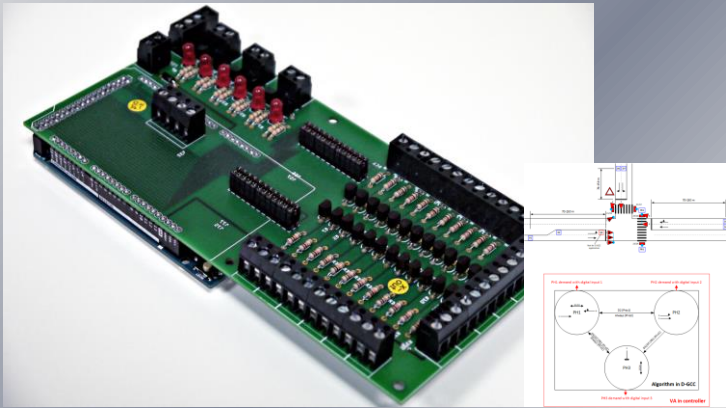
Fixed-wing UAV „Širše“ Roll-Pitch camera positioning module (HW)



# Projects III

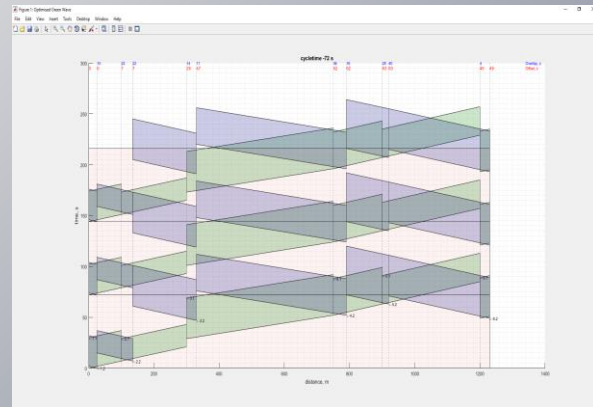
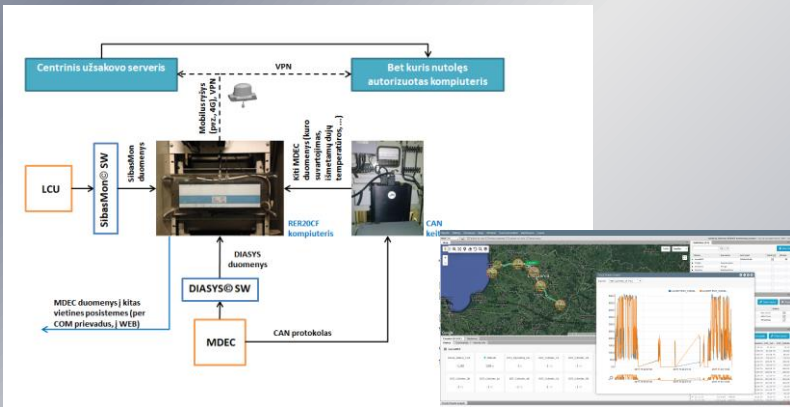
Green time split calculation subsystem for traffic light controllers (HW+SW)

Solid-state laser engraving and cutting machine (HW)



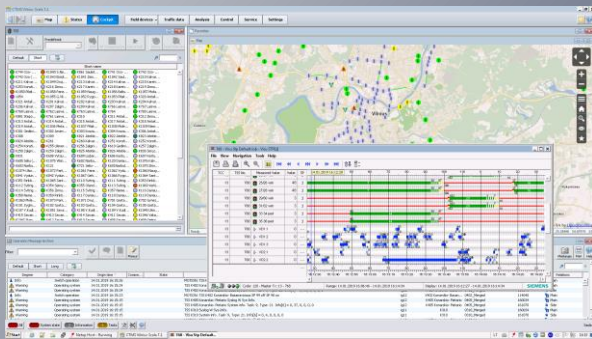
Locomotive Siemens ER20CF sub-system remote monitoring and configuration system (HW+SW)

“Green-wave” optimization for N intersections according to selected criteria (SW)



# Projects IV

Vilnius Central Traffic Management System Upgrade and Maintenance in cooperation with Siemens Mobility LT Branch (HW+SW)





# Acquired HW and SW

CNC mill (effective volume 500x300x40, 700 W)



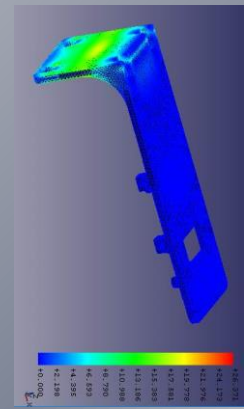
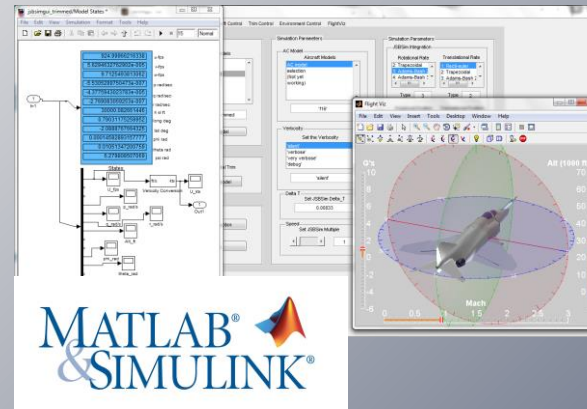
FDM 3D printers (UM2, UM3, effective volume 200x200x200)



CNC laser (effective surface 680x470, 40 W CO<sub>2</sub>)



1. Matlab&Simulink for control system simulation and data analysis.
2. CAD design with FEM analysis



## Dukubu Mechatronics Lab

In the end 2018 Dukubu moved into new HQ and established new Mechatronics Lab.



Thank you for your attention!

