Bay Zoltán
Research Centre

21st DSC 2022 Europe Conference

Virtual validation use of in case ADAS function development of using specific tools as dynamic Driver in the loop simulator

15th September

Márk LELKES PhD
Site leader

BAY Zoltan Nonprofit Ltd. for Applied research

Founded in 1993

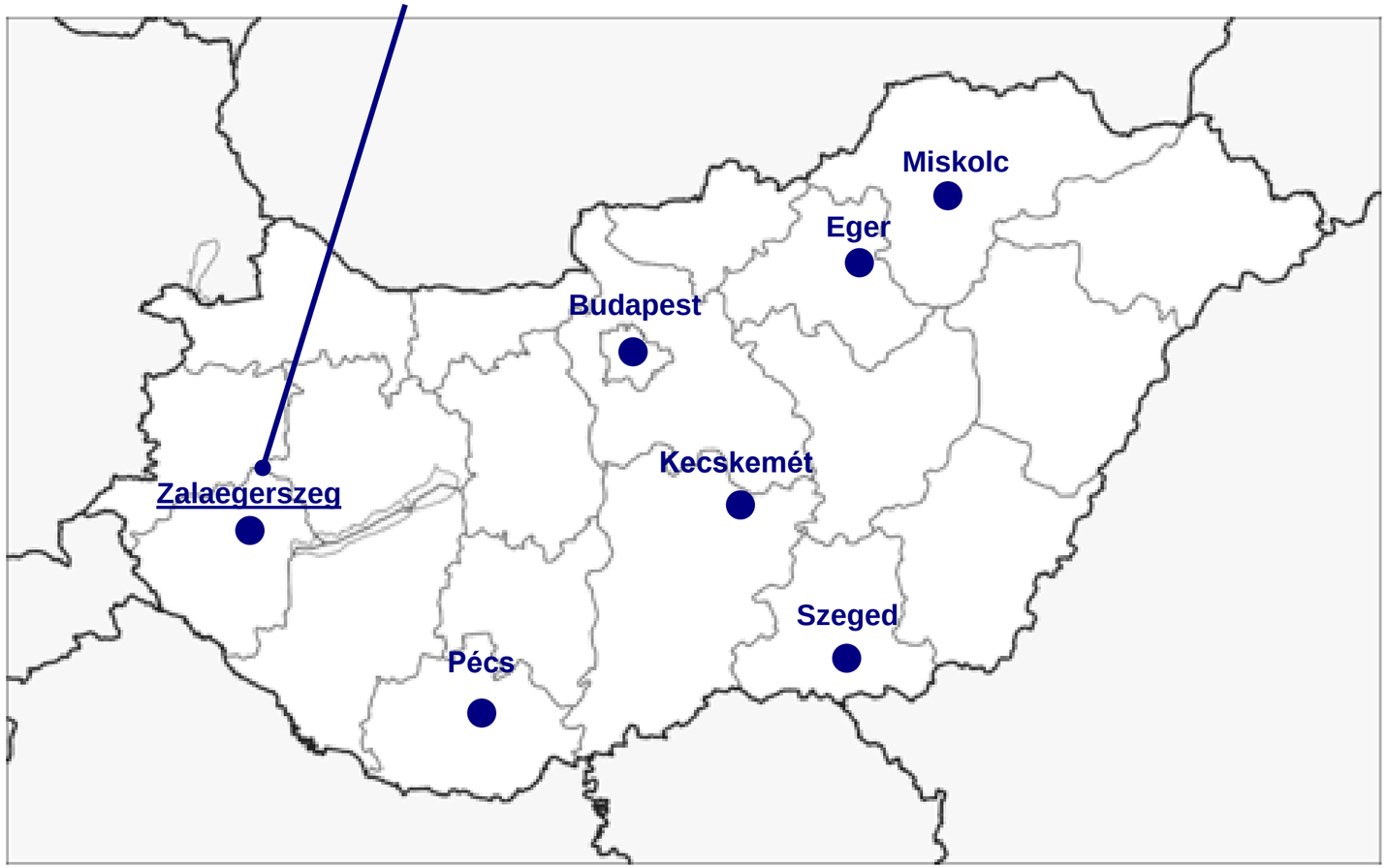
250 employees, 160 researchers

Applied research focus

BAY Divisions:

- ❑ Biotechnology Division (BAY-BIO)
- ❑ Production Division (BAY-PROD)
- ❑ Engineering Division (BAY-ENG)
- ❑ Knowledge Management Centre (BAY-TMK)
- ❑ Business development (BAY-SALES)

BAY ZalaZone DIL Laboratory Located in Zalaegerszeg

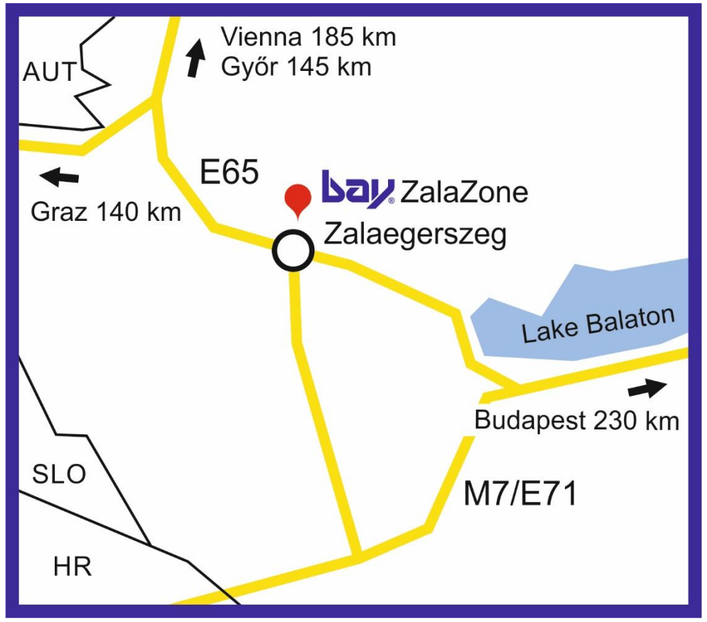


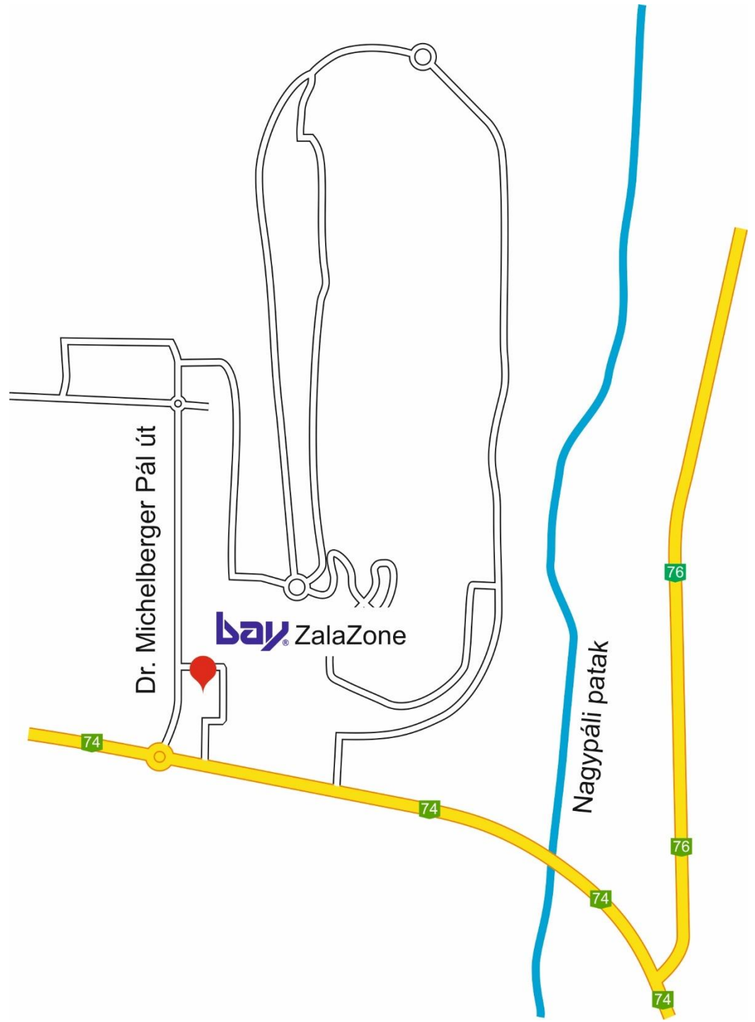
BAY Operation Locations in Hungary

Location

- Located in ZalaZone Park
- Easy access, close to highways (M7/E71, E65)
- Close to Austrian, Slovenian and Croatian border
- Airport access: Sármellék, Graz, Budapest, Győr-Pér
- Graz 2hrs, Budapest 2hrs, Győr 2hrs

- Address: Zalaegerszeg Dr. Michelberger Pál utca 3. 8900 Hungary





Dynamic DIL simulator

ansible motion
driving simulation excellence

Ansible Motion Delta S3 DIL simulator

Technical parameters:

- Interactive real-time dynamic simulation
- Range of motion: ±2m X&Y, ±120° yaw
- 270° forward field of view plus 3 rear view mirror emulators
- 5 projectors
- Active steering
- Active pedals
- Active seat belt tension
- Harshness and vibration simulation
- Available commercial vehicle body kit
- Moving platform carrying capacity up to 500 kg
- Fit for passenger cars, commercial vehicles etc.
- Practical 100 m^2 laboratory area

Usage:

- Chassis dynamics
- Powertrain development and driveability
- ADAS and active safety function calibration
- HMI design evaluations
- V2X studies
- Expert driver assessments
- Human and environment interactions

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BAY software package

VIOSO
allows dynamic eyepoint based warping with multiple camera support

MSC VTD (under procurement)
ADAS and Traffic simulation

AVL VSM
Vehicle model building software

AVL Model.Connect
Co-simulation platform

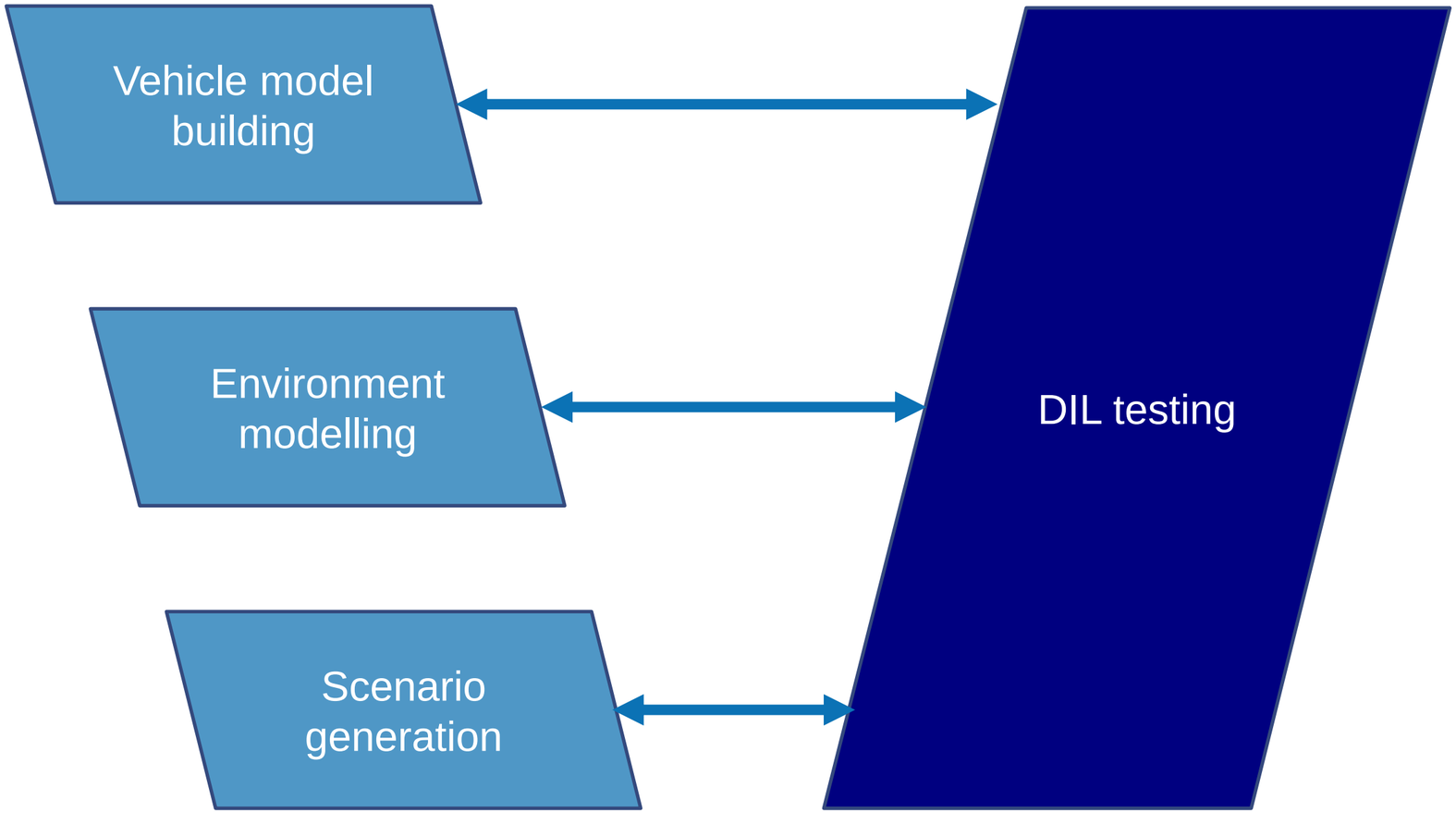
FASTLAP PRO
Racing usage simulation software; high quality vehicle dynamics feedback

Software independence
We could manage nearly all automotive simulation softwares

COSWORTH PI
Telemetries & Data analysing

AML SWs
Motion platform control and manage interfaces

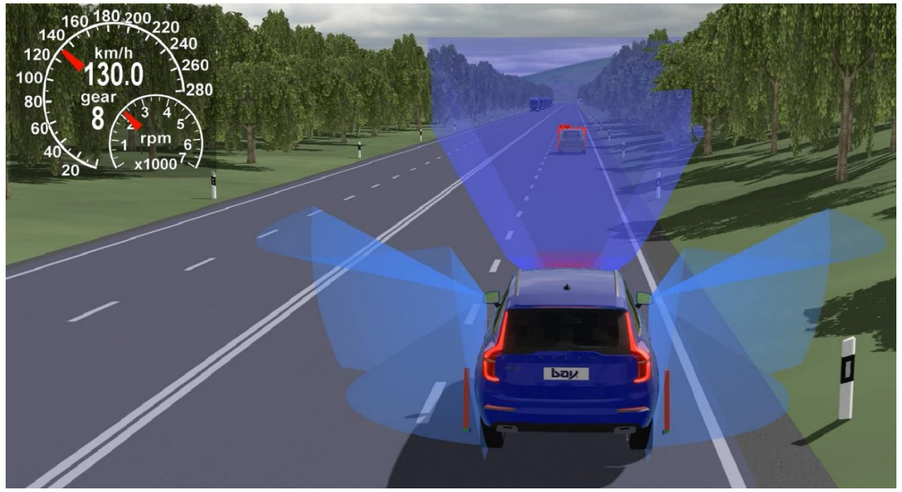
Complete simulation infrastructure



ADAS Function development

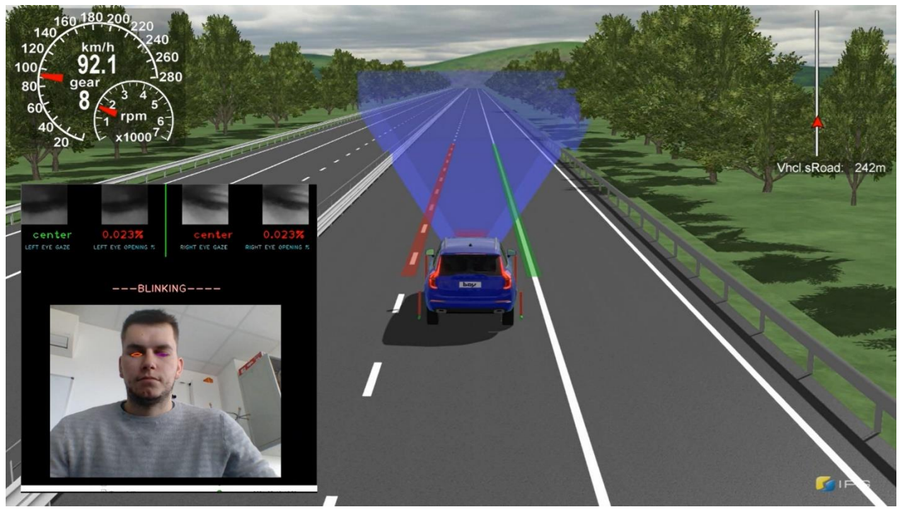
Simulation:

Massive traffic simulation
ADAS functions developing and testing
AD algorithms developing and testing
Scenario development
Environment generation, scanning



Testing:

Vehicle testing preparation
Driveline calibration
HMI testing:
- HUD testing
- Dashboard ergonomic
- DMS sensors and function



Human factor:

Driver training
Reaction time and stress monitoring
Fatigue measuring lab for objective data
Motion sickness

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BAY configuration

- Most advanced DIL simulator, operational from Q4 2022
- Booking from November (w47) 2022
- Part of ZalaZone infrastructure
- Easy access, close to highways
- State of the art service infrastructure
- Independent service provider
- Constant, dedicated, highly trained work force
- In house expertise in ADAS systems, driver monitoring
- Exclusivity offer to partners
- Competitive packages
- Secured data processing
- Commercial and tender services
- Fit for passenger cars, commercial vehicles, others eg aviation
- Subcontractor for customised cabin production

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Contact

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