“SISCOGA\textsuperscript{4CAD} TEST-BED”

18/05/2017

Workshop on Automation Pilots on Public Roads
Brussels
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1. INTRODUCTION TO SISCOGA$^{4CAD}$ TEST BED

2. NEXT ACTIVITIES AND PILOTS AT SISCOGA$^{4CAD}$

3. SUMMARY
SISCOGA4CAD Test bed. Location
SISCOGA$^4$CAD Test bed. Main Objectives

- To establish SISCOGA$^4$CAD test bed as a permanent ITS corridor and as a living-lab located in South West Europe, to strongly support research, development and deployment of connected and CAD functions, following a harmonised European multi-stakeholder approach, and being part of the European reference CAD Test-beds.

- To perform different FOTs and Pilots, to test and to assess from different perspectives (technical, user acceptance, HMI, impact studies, public awareness, infrastructure needs, business models, ...):
  - Day-1 and Day-1,5 cooperative services
  - Connected & Automated Driving Applications

- To perform cross-tests with the Portuguese ITS Corridor to assure interoperability at different Member States

- To contribute to the European leadership position in the CAD domain and to support National Mobility Strategies

- To include different communication technologies in a hybrid approach and different road environments (urban, interurban, rural, dedicated)
SISCOGA\textsuperscript{4CAD} Test bed. DGT North West TMC
SISCOGA4CAD Test bed. Vigo Council TMC
SISCOGA$^4$CAD Test bed. CTAG as R&D Centre
SISCOGA\textsuperscript{4CAD} Test bed. Proving Grounds
• ITS Corridor of more than 130 Km of Urban (Vigo) and Interurban roads (AP9, A52, A55)
• ITS G5: 80 RSUs
• Cellular: 3G/4G and LTE/V2X, 5G
• Connected with Portuguese ITS Corridor
SISCOGA⁴C⁴D – FOTs and Pilots

R&D | FOT | PILOT | DEPLOYMENT
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C2ECOM

SISCOGA NATIONAL FOT

SISCOGA DRIVE-C2X FOT

COMPASS4D PILOT

CO-GISTICS

SCOOP
Prioridad vehículos de emergencia
SISCOGA4CAD Hybrid Architecture
SISCOGA$^4$CAD – Stakeholders and Partners

- DGT
- CTAG
- CONCELLO DE VIGO
- PSA
- CENAGA
- Telefónica
- VITRASA
- Central Radio Taxi Vigo
- ESYCSA
- Little
INSTRUCTION 15/V-113: Authorization to conduct tests or research trials of automated vehicles on roads open to general Traffic.

- Applicant must provide a system certification, complying with the Annex I requirements.
- The authorization procedure is really swift and flexible.
- Mutual recognition with other Member States

**Autonomous vehicles are being tested**

Future: Type approval → Software certification
SISCOGA\textsuperscript{4CAD} Strong cooperation with Portuguese Corridor
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SISCOGA 4CAD – Present and next Pilots and activities

**January 2016 – December 2018**

**Functions:**
- Selected Day 1 Cooperative Services

**Fleet:** 10 Connected Vehicles

**Location:** SISCOGA 4CAD Interurban and Portuguese Corridor

**June 2017 – November 2020**

**Functions:**
- Traffic Efficiency (Green priority, GLOSA, Dynamic Speed Limits, Probe Vehicle Data)
- Infrastructure To Vehicle Safety (RWW, RHW, EVW, Signal Violation Warning, Warning System for Pedestrian)
- Vehicle to Vehicle Safety (Urban ACC, Emergency Brake Light, SVW, VRUs Warning)

**Fleet:** 20 Trucks, 10 Buses, 30 Cars, 10 Emergency Vehicles, 10 motorcycles

**Location:** SISCOGA 4CAD Urban (Vigo) and Interurban

**July 2017 – June 2020**

**Functions:**
- AUTOMATED VALET PARKING
- URBAN AUTOPILOT

**Fleet:** 4 CAD Vehicles

**Location:** SISCOGA 4CAD Urban (Vigo)

**July 2017 – December 2020**

**Functions:**
- DAY 1, DAY 1.5 cooperative services
- Urban Autopilot
- Automated Valet Parking
- Hightway Chauffeur
- Last Mile Autonomous Shuttle Services

**Fleet:** 30 Private Vehicles, 15 Taxis, 30 Buses, 5 Emergency Vehicles, 5 CAD Vehicles

**Location:** SISCOGA 4CAD Urban and Interurban and Portuguese Corridor (cross-tests)

**More to come …**
Example AUTOPILOT location within SISCOGA$^4$CAD
Example CAD Functions – Cooperative Highway Chauffeur
Example CAD Functions in Urban Scenarios

Cooperative Urban Autopilot: Cooperative AEB
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Muchas Gracias