GAMMS

ROBOTS MAPPING FOR ROBOTS

Galileo/GNSS-based Autonomous Mobile Mapping System

GAMMS is a Horizon2020 project enabling the exploitation of space data for surveying and mapping.

Our objective is to develop an autonomous terrestrial mobile mapping system (AMMS), based on the tight integration of autonomous vehicle (AV), navigation/geodetic, and artificial intelligence (AI) technologies. More specifically, we are developing:

· A **mapping robot** for geodata acquisition.

· An AI-based highly automated **mapping software** to produce HD maps from the MMS remote sensing data.

Arrive Time
19:22

Galileo/GNSS-based Autonomous Mobile Mapping System

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EUSPA
European Union Agency for the Space Programme

GAMMS

ROBOTS MAPPING FOR ROBOTS

GALILEO SATELLITE · AUTONOMOUS VEHICLE · HD MAPS · ARTIFICIAL INTELLIGENCE

OUR VISION

The future of mapping is **robotic mapping**, where robotics, cartography and navigation/geodesy meet. In the long term, we envision fleets of low-cost, autonomous, electrically-powered, mobile mapping systems (MMS) collecting geodata in a massive, continuous yet inconspicuous way to produce HD maps. We also envision AI as a core component of HD map processing engine to deal with huge loads of geo-data, collected daily/weekly and worldwide. In other words, **robots mapping for robots.**

OUR MISSION

The overall objective of GAMMS is to develop an autonomous terrestrial mobile mapping system (AMMS), based on the tight integration of **Autonomous vehicles (AVs), Navigation/geodetics** and **Artificial Intelligence (AI) technologies.** More specifically, we aim at developing an advanced prototype of an autonomous terrestrial mobile mapping system based on an already existing Level of Automation 4 AV for cm-level accurate and certifiable mapping to serve the needs of High Definition (HD) maps for autonomous vehicles.

OUR SOLUTION

Our result is the production of high-definition, multi-purpose and accurate maps in a much faster and cheaper way than today:

Ultra-safe navigation (real-time) of autonomous vehicles (terrestrial and other).

High-accuracy trajectory determination time, position, velocity and attitude of mapping sensors (post-processing).

Certifiable and traceable high-quality maps amenable for terrestrial autonomous vehicles and other types of unmanned vehicles.

Affordable and frequently updated base maps for further continuous map update.

KICK OFF

● **GAMMS UNITARY DEVELOPMENT**
Iteration 0

● **GAMMS DEMONSTRATOR**
Iteration 1

● **GAMMS PROTOTYPE**
Iteration 2

END

OUR PARTNERS

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