⋮⋮Robotnik

PRESS RELEASE

January 2022

NESTOR – Strengthening and Safeguarding the European borders through a fully functional, next generation border surveillance system.

The 18-month European project, NESTOR, has recently launched its activities to enhance the protection and safeguarding of the European marine and land borders. Supported by the EU's Horizon 2020 Programme, NESTOR brings together 21 partners from 13 European countries to create a fully functional next-generation holistic border surveillance system for pre-frontier situational awareness, reaching both maritime and land borders operations.

For the past few years, European Community has faced a number of challenges related to the security of its external borders, both at a political and tactical level. The severity and the abrupt emergence of the events at the European land and maritime borders highlighted the need for policies and concrete measures to safeguard Europe's security. Both the European Commission and Council are taking several actions towards this direction. The European Border and Coast Guard Agency, Frontex, was established to facilitate cooperation between border authorities in each EU country, provide technical support and expertise. To this end, Frontex became a central point of contact and set the standards for all European border guards. Even so, the relevant authorities operate for a long-time interval, under severe conditions, 24 hours a day. Thus, a step change is required to manage the complex and dangerous operational environments the border authorities face in their daily surveillance activities.

The **NESTOR - An Enhanced Pre-Frontier Intelligence Picture to Safeguard the European Borders -** project directly addresses these issues and supports the concept of the European Integrated Border Management by integrating state-of-the-art technologies for surveillance into a holistic deployable system capable of detecting, assessing and efficiently responding to illegal activities. Specifically, the resulting system will be enriched with accurate detection capabilities to optimally monitor border territory. Multimodal data feeds from numerous

off-the-shelf devices will be fused and processed with Artificial Intelligence (AI) techniques to enhance situational awareness and increase the decision-making capacity of Law Enforcement and related Authorities. Advanced visual analytics will be developed in a comprehensive framework to present the acquired sensory readings and the detection outcomes. NESTOR will also focus on improving the overall operational image of the surveillance areas and qualitatively expand detection capabilities through mixed reality technologies by offering an effective coverage surveillance system.

National, Regional and European authorities responsible for border surveillance, Law Enforcement Agencies, intelligence agencies, security providers, are all examples of end users that will benefit from the NESTOR research. Key end-users such as the Hellenic Police, the Joint Rescue Coordination Center of Cyprus, the Center for Security Studies of Greece, and the State Border Guard Service under the Ministry of Interior of the Republic of Lithuania are members of the NESTOR consortium. They will contribute to the development of NESTOR use cases and application scenarios and actively participate in the refinement of expert needs and requirements in the NESTOR focus areas.

The official Kick-Off Meeting of the NESTOR project took place as a virtual meeting on November 4th and 5th, 2021, and welcomed over 50 attendees committed to working together to develop prototype technologies, illustrate use cases, and produce a valuable and deployable solution.

Built upon existing state-of-the-art technologies the NESTOR solution will not only permit considerable cost-savings on performance and management but will also guarantee a quick adoption of the results.

Robotnik will be in charge of integrating the most innovative sensor technologies into an Unmanned Ground Vehicle (UGV) for outdoor use, capable of performing border surveillance operations and equipped with the latest sensors to ensure full georeferencing capability and useful data collection.

The objective of the mobile robotic solution is to collect and send real-time mission data from cameras and other sensors integrated in the UGV.

It must operate in harsh outdoor conditions (including marine sites) and be able to cover large areas of territory.

EDITOR NOTES

NESTOR is an EU-funded project consisting of 21 partners from 13 countries aiming to address a common challenge among EU countries, namely, the protection and safeguarding of the European marine and land borders. Specifically, NESTOR develops a next generation holistic border surveillance system providing pre-frontier situational awareness reaching both maritime and land borders.

The resulting system is a flexible, integrated solution adapted to end-users' needs, combining comprehensive surveillance capabilities, timely pre-frontier situational awareness, and state of the art sensory devices and off-the-shelf components. NESTOR technologies form an interoperable network to detect, assess and respond to illegal activities in border surveillance missions in both land and maritime operations. The complete NESTOR concept will be assessed in three international trials that include both land and maritime boarder operations.

Website: https://nestor-project.eu/

Social Media: Twitter: @Nestor_H2020 |LinkedIn: @nestor-project

Duration: 18 months | Starting from 1 November 2021

Total Funding/ EC contribution: €5 million

Coordinator: Mrs Giannoula Chalvatzi, Hellenic Police (HP)

NESTOR Consortium:

The NESTOR consortium consists of 21 partner organisations coming from 13 European Countries:

1. HP (http://www.hellenicpolice.gr), Greece
2. CDBP-MOI (http://www.nsgp.mvr.bg), Bulgaria
3. DBAM (https://mvr.gov.mk/default), Republic of North Macedonia
4. JRCC (http://www.mod.gov.cy/jrcc), Cyprus
5. SBGSLT (http://www.pasienis.lt/), Lithuania
6. GUCI (https://www.guardiacivil.es/en/index.html), Spain
7. WCO (http://www.woitsch.com), Finland
8. KEMEA (http://www.kemea.gr/en/), Greece
9. CERTH (https://www.certh.gr/root.en.aspx), Greece
10. STWS (https://www.satways.net), Greece
11. DCD (https://www.decodio.com/), Switzerland
12. NARDA (https://www.narda-sts.com/en/), Germany
13. MILTECH (https://www.miltech.gr/), Greece
14. MAG (https://www.maggioli.com), Italy

15. ELI (https://elistair.com/), France
16. OMST (https://oceanscan-mst.com/), Portugal
17. ROB (http://robotnik.eu/), Spain
18. UOULU (https://www.oulu.fi/en), Finland
19. CENTRIC (https://research.shu.ac.uk/centric), United Kingdom
20. HEN (https://www.hensoldt.net/), Germany
21. ISDEFE (https://www.isdefe.es), Spain

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