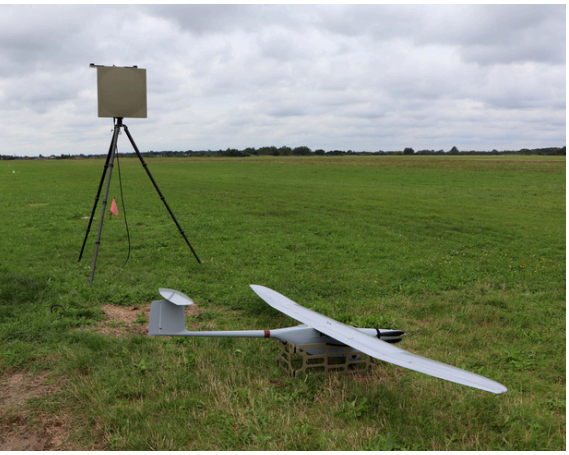
Collaris TRIALS



Stalowa Wola HCP (Poland)

30 - 31.08.2023

The goal of the Trial was to provide the necessary support in coordinating flights of unmanned aerial vehicles (UAVs) and to obtain and process geospatial information for the exercises. The exercise scenario included a number of different episodes related to the flood threat. There were two special components: the development of an optimal model for conducting drone operations during flood risk and the use of the FlyEye airframe, operated by the 3rd Subcarpathian Territorial Defense Brigade, to test the platform's suitability for detecting such incidents.

Participants

Polish Air Navigation Services Agency (PANSA), Regional Water Management Board (RZGW) in Rzeszów, State Fire Service, Volunteer Fire Service, 3rd Subcarpathian Territorial Defense Brigade, Provincial Crisis Management Center

International participants

The COLLARIS Network Consortium, Swedish Police (SE), The Research Institute of Sweden (SE), Kymenlaakso Rescue Department (FI), Södertörn Rescue Service (SE)

Results

The course and results of the exercise were presented during an external meeting, discussing the implementation of the stated objectives of the exercise in terms of the possibility of using UAVs to monitor the flood situation and coordinating the flights of multiple drones over the area of operations.

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SECOAS (France)

Rescue Aerial Coordination Training Simulator

21 - 23.11.2023

The Trial at Valabre focused on the use of simulation as a method of tactical training for drone pilots and on a workshop with experts from the Union Civil Protection Mechanism (UCPM) attending the meeting as part of an expert exchange programme.

During the training sessions, participants from the COLLARIS project and invited UCPM experts had the opportunity to test Valabre's simulations of emergency operations scenarios using drones as a tactical training method.

Participants

Participants of the Union Civil Protection Mechanisms Exchange of Experts Programme (representatives from Poland, Cyprus, Finland, Portugal, Italy, Croatia and Sweden) and the COLLARIS Network Consortium.

Results

During the training sessions, participants had the opportunity to test Valabre's realistic drone flight simulations of crisis operations scenarios using drones as a tactical training method. The workshop sessions made it possible to learn about the required qualifications for pilots, training programs, methods of organizing drone units and their deployment mechanisms and using drones in crisis management operations in France, Italy, Portugal, Poland, Austria, Croatia, Finland, Sweden and Cyprus.

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Skövde (Sweden)

22 - 24.05.2024

The Trial in Skövde was divided into live simulation and virtual simulation exercises for emergency management, focusing on the multi-agency managerial level. Its scenarios were designed to necessitate the use of several UAS and thereby enhance training related to air traffic management, safety, and collaboration between the different organizations involved. The evaluation focused on how the challenges related to use of UAS were addressed in the two training formats.

Participants

Swedish Police, Western Norway University of Applied Sciences, Södra Älvsborg Rescue Service Association, Fire and Rescue Service Skaraborg, Södertörn Fire Protection Association, Danish Emergency Management Agency, Croatian Directorate of Civil Protection, National Firefighters School of Portugal

Results

There is a need for improved collaboration and routine cooperation among various actors. Drones are essential for quick overviews and response planning, with identified areas for technical improvements. Virtual exercises complement practical training and offer insights into handling war-like scenarios.

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Innsbruck (Austria)

11.06.2024

The Trial in Innsbruck was organized together with the EU HORIZON project CREXDATA and aimed to evaluate the capabilities of existing and emerging UAS technologies, particularly neural radiance fields (NeRF) for creating interactive 3D environments from visual data captured by drones. The trial included UAS flights, an introduction to NeRF technology, the application of NeRF on collected images, and an evaluation.

Participants

Tyrol Dispatch Centre, Innsbruck Fire Brigade, Tyrol National Warning Centre, Volunteer Research Fire Brigade of TU Graz, Upper Austrian Fire Brigade, representatives of the EU-funded CREXDATA project

Results

NeRF showed potential in creating detailed 3D models useful for visualizing flood impacts, assessing terrain accessibility, and inspecting structures. However, further development is needed. 3D models could be particularly beneficial for planning and documenting disaster response efforts but the real-time operational value is currently limited by technical complexity and the need for accurate data. Centralized image storage for nationwide access was deemed desirable. A gradual improvement of models over time was recommended to ensure reliability.

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Nicosia (Cyprus)

25 - 26.09.2024

The Trial in Nicosia aimed to present and evaluate the currently used technical solutions for data analysis and data sharing, with a specific focus on Unmanned Aerial Systems (UAS) data. The trial featured a joined exercise with the Cyprus Civil Defense, which included an organized search and rescue operation, using UAVs, the AIDERS platform and Remote Identification tools for acquisition and analysis of data.

Participants

Aerial Observation Unit of the Cyprus Civil Defence (CCD) and the COLLARIS Network Consortium

Results

The AIDERS platform demonstrated significant potential in supporting operations by providing enhanced visualization of UAV locations, live camera streams, mission planning, and Remote ID data. The ability to store historical data from operations offers valuable insights for future analysis. Additionally, integrating machine learning and computer vision algorithms could automate data processing, classification, and object/people detection, greatly improving efficiency. This advancement would enable faster decision-making and more effective responses to rapidly changing situations.

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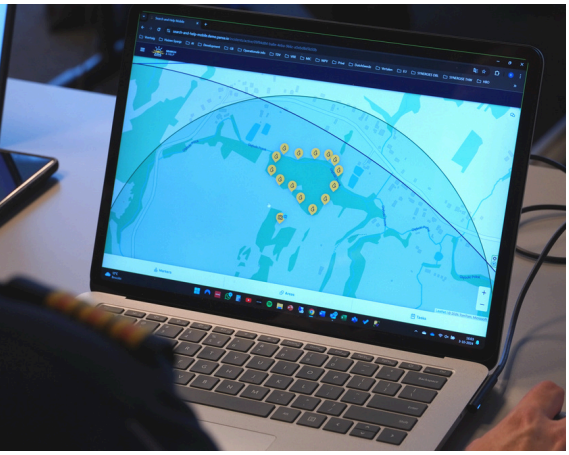

Poznań (Poland)

02 - 04.10.2024

The goal of the Trial was to provide an overview of Poland's and European air traffic management (ATM) arrangements for drone operations in emergency scenarios. Participants engaged in hands-on training with the Polish Search and Help system during a table-top exercise (TTX) to evaluate the system's effectiveness in increasingly complex emergency situations. Workshops focused on UAV data analysis and sharing, with an emphasis on drone mapping activities. The invited UCPM experts together with the COLLARIS network Consortuim had also the opportunity to discuss establishing an Observatory of Best Practices regarding the use of drones and ATM solutions during crisis situations.

Participants

Participants of the Union Civil Protection Mechanism Exchange of Experts Programme (representatives from Austria, Cyprus, Denmark, Finland, Croatia, the Netherlands, Portugal and Sweden), the COLLARIS Network Consortium, Polish Air Navigation Services Agency (PANSA), Polish State Fire Service

Results

The Trial was a great opportunity to learn about and compare different European approaches to ATM and use of drone in crisis management. UCPM Experts reviewed Poland's practices, shared their ideas, and proposed potential improvements. During the TTX exercise, teams from different countries and organizations worked together, providing valuable feedback to improve the S&H application. The exchange has allowed the creation of a permanent (and expandable) network of international experts, willing to share their experience and knowledge on ATM, use of drones and crisis management in general.

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