WELCOME TO THE 7TH CEASEFIRE PROJECT NEWSLETTER!

CEASEFIRE

Introduction

The EC-funded R&D project **Ceasefire**, a 3-year Horizon Europe Innovation Action launched in October 2022, has been designed to improve the crime-fighting ability of European nations using modern technology. It brings together 21 expert partners from across Europe, including industrial partners, Law Enforcement Agencies (LEAs) and research universities or institutions, while focusing on combatting *firearms trafficking*. Ceasefire is coordinated by the *Centre for Research and Technology – Hellas* (CERTH, Greece).

Among other activities, the project is building a system that hosts and interconnects various **digital tools**, based on state-of-the-art Artificial Intelligence (AI) and Information & Communication Technologies (ICT). Developed to address the 5 Ceasefire use-cases, these tools aim to automate and streamline the work of LEA officers in the firearms trafficking domain.

Insights from the Consortium's first Pilot Programs

The consortium's recent series of pilot programs across Europe marked a significant step forward in the project's developments. Beginning with a pilot in Lisbon, which introduced advanced AI tools for monitoring firearm incidents, tracking dark web trade, and identifying 3D-printed firearm blueprints, the pilots demonstrated promising results in real-world applications. Subsequent pilots in Belgrade, Paris, and Gdynia continued to refine and test these tools, with a focus on mobile apps for firearm seizure registration and AI-powered detection of illicit trafficking through mail and courier services. The hands-on participation of law enforcement end-users provided valuable feedback, shaping the next development phase of these innovative solutions to support European efforts in tackling firearm-related threats.

Pilot #1

The first pilot took place in Lisbon, Portugal. During this pilot, the following use case applications were presented to be tested by the end-users of the consortium.

Use Case #1: Firearm Incident Monitoring

This tool enhances European intelligence on firearms trafficking by using AI to analyze online news in near real-time. It provides overviews of incidents, risk indicators, red flags, and intelligence on firearm-related crimes like seizures, homicides, shootings, and robberies.

Use Case #3: Dark Web Firearms Trade

This use case collects and analyzes Dark Web data to identify suspicious firearms marketplaces and provides law enforcement agencies with intelligence to investigate the network of transactions involved.

Use Case #5: 3D-Printed Firearm Blueprints

A web crawling system collects intelligence on 3D-printed firearm blueprints and related online discussions, combining automated and user-configured searches.

The LEA participants of the consortium conducted thorough testing on all three applications and provided **valuable feedback**, which will be incorporated into the project's next development cycle. The applications were widely used by most participants, who praised their innovative capabilities and potential.

Pilot #2

The second pilot took place in Belgrade, Serbia. During this pilot, the same use case applications as the first pilots were presented (UC#1, UC#3, and UC#5) to be tested by the end-users of the consortium.

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During this pilot, the use case applications delivered r**esults comparable to the first pilot**. Participants explored a wide range of system features, actively testing the applications in real-world scenarios. Their hands-on engagement provided valuable feedback, helping to refine and enhance future iterations of the system.

Pilot #3

The third pilot took place in Paris, France, focused **exclusively on the second use-case**, which involves on-the-spot Firearm Seizure Registration and Reporting.

Use Case #2: On-the-spot Firearm Seizure Registration and Reporting

This mobile app helps law enforcement identify seized firearms at crime scenes. It addresses challenges like altered or removed serial numbers and officers' limited firearm expertise. The app employs AI-powered computer vision to examine a firearm photo, identifying features like brand, model, caliber, and serial number location. It then connects with the central Ceasefire database to create reports for additional analysis.

During this pilot, LEA participants rigorously tested the first version of the mobile application, demonstrating its **reliability and practicality** for law enforcement use. They explored its key features, assessed its performance in real-world scenarios, and provided valuable feedback to enhance future iterations. Their insights will help refine the application to better support officers in the field.

Pilot #4

The fourth pilot took place in Gdynia, Poland, **focusing exclusively on the fourth use-case**, which involves the detection of illicit firearms trafficking through mail order and courier services, using scanning technologies.

Use Case #4: Mail order and courier service firearms trafficking detection using scanning technologies

This use case involves an AI-powered tool designed to assist customs officers in identifying illicit firearm trafficking through postal and courier services. The system examines X-ray scan images of mailed parcels to automatically detect firearms, ammunition, and components hidden within shipments.

Officers can use the desktop application's intuitive interface to review, edit, and submit reports to a central database for additional analysis. Utilizing deep neural networks, the tool ensures precise classification and location of suspicious objects in scanned images, thereby strengthening border security.

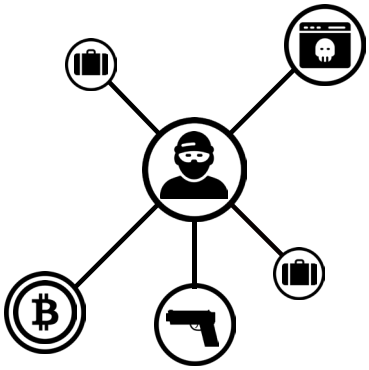
LEA participants tested the first version of the application, focusing on its key features, performance, and overall usability. They provided valuable feedback on its **accuracy and ease of use**, which will help improve the application in future updates.

Key takeaways

The consortium recently ran pilot programs across Europe to **test new tools for improving firearm law enforcement**.

In Lisbon, we tested AI for tracking incidents and detecting 3D-printed firearms, receiving positive feedback. The same tools were tested in Belgrade with similar results. In Paris, a mobile app for registering firearm seizures worked well in real situations, while in Gdynia, an AI tool showed promise in spotting illegal firearms in mail.

These pilots helped refine the tools to better support law enforcement efforts.



The future

The consortium plans to build on the success of its pilots by refining and expanding tools to fight firearm-related crime in Europe. Future pilots will improve application functionality and accuracy using end-user feedback. There will be a focus on making systems scalable for wider deployment. Ongoing efforts will enhance AI, user interfaces, and tackle challenges like advanced illicit firearm trafficking. The consortium is dedicated to providing innovative solutions to support law enforcement and improve public safety.

Ceasefire links

The CEASEFIRE dissemination channels will host regular updates regarding the project:

CEASEFIRE Web site:
https://ceasefire-project.eu/

CEASEFIRE LinkedIn:
https://www.linkedin.com/company/ceasefireproject/

CEASEFIRE Facebook:
https://www.facebook.com/people/Ceasefire-Project/100089862614779/

CEASEFIRE X/Twitter:
https://twitter.com/CeasefireHE

CEASEFIRE YouTube:
https://www.youtube.com/@CeasefireProject

Any relevant stakeholder (LEAs, security-related EU/national/international bodies and initiatives, related EC-funded research projects, SMEs active in security products/services, etc.) are welcome to join the CEASEFIRE community, in order to receive regular updates, news and invitations from the wider security ecosystem!

You can **subscribe easily at https://ceasefire-project.eu/community/**. *All personal information are kept internally within Ceasefire, adhering to the highest privacy standards.*

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