TRILLION

TRusted, CItizen - LEA colLaboratIon over SOcial Networks

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March Newsletter, 2018

http://trillion-project.eng.it/

Learn about TRILLION
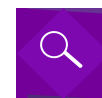
Work together

We are pleased to introduce the second edition of the TRILLION newsletter. In this issue you will find insights about the successful implementation of the TRILLION platform, the trial events that took place over the last few months, and the latest published deliverables.

As the project enters its final phase, all planned targets leading towards the implementation and integration of TRILLION's platform have been reached. The platform adopts a Service-Oriented Architecture, allowing the dynamic integration, exploitation and orchestration of services for data discovery and extraction, and is open to additional information sources and context-awareness tools.

Two important activities took place in recent months: In July and October 2017 the project held the α-trials of the platform. Through events in the UK, Netherlands, Italy and Portugal, over 174 end users (citizens and law enforcement officers) were given the opportunity to test the platform, in turn providing feedback both on any technical issues encountered as well as their more general thoughts on how they view the platform. These TRILLION pilots allowed end users to provide useful input regarding the TRILLION solution and enabled the evaluation of the communication process between LEAs (Law Enforcement Agencies) and citizens. Finally, the first set of Serious Gaming training sessions dedicated to both LEAs and citizens represented an important step for the project.

To maximise the impact of the project, many different dissemination actions took place over the last five months. Members of the TRILLION team participated in conferences, workshops and forums, organised demonstration days and submitted papers to academic journals.

Barbara Pirillo (Engineering Ingegneria Informatica SpA) and Peter van de Crommert (DITSS) supporting TRILLION Serious Games

Elisabeth Quercia and Silvio Sorace (Engineering Ingegneria Informatica SpA) supporting LEAs and citizens during Serious Games, Ancona (ITALY)

TRILLION
in a nutshell

13

partners from

8

countries

delivering **1** integrated platform

tested across **5** locations

involving **11** users

over **36** months

Peter van de Crommert (DITSS), Silvio Sorace (Engineering Ingegneria Informatica SpA) and Patrikakis Charalampos (TEIP) supporting Serious Games involving LEAs and Citizens in Eindhoven (NETHERLANDS)

Silvio Sorace, Ernesto La Mattina, Elisabeth Quercia and Enza Giangreco (Engineering Ingegneria Informatica SpA) supporting LEAs during Serious Games, Lecce (ITALY)

Serious Games involving LEAs and Citizens in Lisbon (PORTUGAL)
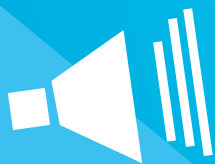
Main Project results

Throughout the last five months the TRILLION team has put in a great deal of effort to ensure that each result produced is compliant with security, privacy, legal, ethical and usability standards.

In the context of WP2 "LEA and citizens engagement: Use cases & requirements", the creation and the consolidation of a user community represents an important task which is still on-going: the level of engagement of the TRILLION users who participated in the project's activities is in line with what has been expected. As a result, TRILLION can now show how the platform will look in terms of design and functionalities to an established community who provided useful feedback during the trial sessions. Both citizens and LEAs have highlighted their interest in the TRILLION platform since the pilot and the first trials, recognising its potential as an innovative method of LEA-citizen communication. A set of new actions are planned for the spring of 2018 to involve end users and continue to **build the community**.

The system architecture has been updated, following the conclusions from the field trials. In particular, following the alpha pilot testing, the **TRILLION mobile, web and wearable applications** were redesigned in order to become more appealing and user friendly. In parallel, a cyber trustworthiness monitoring companion service was developed in order to ensure the trustworthiness of devices using the TRILLION applications.

WP4 "Information extraction and management" finalised the modules that collect and analyse various data sources. The modules are packaged as services that are integrated with the TRILLION orchestrator, which manages the information flow in the platform. The developed modules support the gathering of data from social media, from mobile devices and from wearable devices as well as city-wide available open data and are used for improved **situational awareness**. The gathered data, such as text, images, videos, wearables and tabular data, are processed, classified and analysed to extract knowledge while respecting privacy and managing anonymization. The data analytics modules, also developed, enable understanding and awareness of the city's situation and better decision making. Finally, the profiling components that are provided in this work package ensure better assignment of tasks/actions to different community policing actors (i.e. citizens and LEAs). With the whole WP4 toolset, TRILLION is able to digest a wide range of data sources to support the communication between citizens and LEAs and the effective application of community policing approaches.

After the release of the first version of the TRILLION platform (WP6 "Prototyping & integration"), tests were executed to validate the platform, collecting feedback from citizens and Law Enforcement Officers. Those collected data were used as the starting point for implementing the beta version of the platform. Another important output of WP6 is the Criminal Act ontology (http://is3lab.eng.it/ontologies/criminalact.owl). The proposed taxonomy supports the definition and representation of the targeted security events that the system aims to handle in order to distinguish between a criminal act, a threat to public security, and suspicious behaviour.

The α-pilot events that took place in October 2017 involved both citizens and Law Enforcement Officers (LEOs). Originally, TRILLION tests were planned only in the UK and the Netherlands. In a second phase, it was decided to hold two additional pilots in Ancona and Lecce (Italy). During the General Assembly meeting in Eindhoven in May 2017 it was decided to also use the TRILLION presence at the NGCP Conference in October 2017 in Heraklion, Crete (Greece) as an α-pilot test opportunity. We are currently preparing the **beta pilots** in Italy, UK, Portugal and Netherlands in April, May and June 2018. The second **Serious Gaming events** will also be held in June 2018.

Conferences

24th - 26th October 2017 - TRILLION presented at the eRA12-International Scientific Conference, Athens, Greece.

25th - 27th October 2017 - TRILLION presented at the "Next Generation Community Policing Conference" in Heraklion, Crete , Greece
At the "Next Generation Community Policing Conference" in Heraklion, a comprehensive presentation of TRILLION's platform took place. During the conference TRILLION tools were presented to more than 50 attendants. In particular:
- Web platform for citizens
- Web platform for LEAs
- Mobile app for citizens
- Mobile app for LEAs
- Privacy Protection Communication Gateway
- Wearable app for citizens
- Extended capabilities (TRILLION button)
- Research on gesture recognition for emergency report generation and dispatching

A full demonstration of the TRILLION platform (end to end, involving apps and services) was also given. At the end of the meeting, an interview to the Crete TV channel was given by Patrikakis Charalampos, TRILLION Scientific Coordinator, presenting the benefits and capabilities of the platform (*see picture above*).

15th - 17th November 2017 - TRILLION presented at the "Security, Democracy & Cities. Coproducing Urban Security Policies" conference, Barcelona, Spain
TRILLION attended the international and interdisciplinary conference dedicated to the coproduction of urban security policies and organised by the European Forum for Urban Security in partnership with the City of Barcelona and the Government of Catalonia (Spain). The event was a great opportunity to meet relevant stakeholders from all over Europe involved in urban security: elected officials, civil servants, national administration, magistrates, law enforcement agencies, social workers, researchers, and representatives of the private sector and civil society.

7th March 2018 - TRILLION presented at 10th Community of Users on Safe, Secure and Resilient Societies, Brussels, Belgium
The event was organised by the European Commission - DG HOME with the objective to better understand and discuss the link between the most relevant stakeholders when talking about community policing: practitioners, citizens, policy makers, researchers: what is the weak point and how to resolve the identified problematic areas? The round-table presentation involved several FP7/H2020 projects selected by the European Commission ANYWHERE, ATHENA, CITYCoP, City.Risks, ICT4COP, ILEAnet, INSPEC2T, SLANDAIL, SMR, TACTIC, TRILLION, Unity.

Workshop

The TRILLION team participated at the 3rd LASIE Workshop: "Supporting forensic analysts in digital evidence retrieval and analysis", which took place in Turin, Italy on 28th September 2017.

Forum

The TRILLION team participated at the "Big Data Value Forum" held in the Palais des Congrès of Versailles, France from the 21st to 23rd November of 2017 (*see picture on the left*), which successfully attracted around 1000 attendees. During the event flyers and newsletters were distributed to the attenders and around 200 newsletters were sent by email to subscribers.

Papers

- "DepthRank: Exploiting Temporality to Uncover Important Network Nodes": paper presentation at the Conference SocInfo2017 (accepted);
- "On applying a Deep Convolutional Neural Network to Vertically Stacked Motion Signals": paper presentation at the Conference IEEE Percom (submitted);
- "Wear It and Share It: Wearables and Security": an article which also refers to TRILLION and was published at Cutter Consortium web page (accepted);
- "Serious games: an attractive approach to improve the awareness" selected for publication in "Springer Briefs in Policing";
- "Use of apps for Crime Reporting: privacy concerns and protection of personal data" in "Springer Briefs in Policing".

Other Actions

- A demonstration of the TRILLION platform and its capabilities was given to a group of Erasmus students that visited PUAS on the 6th October of 2017;
- XLAB participated in the OASIS technical committee for Privacy by Design Documentation for Software Engineers.

Stay tuned!

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