

# PSCE Conference Report

Brussels, 23-24 May 2018

Public Safety Communication Europe (PSCE) Forum held its 18<sup>th</sup> conference on **23-24 May 2018** in Brussels. The conference was followed on the 24<sup>th</sup> afternoon and the 25<sup>th</sup> by an international workshop organized as part of the Public Safety Wireless Leaders Group.

Around 70 participants from more than 20 different countries attended across the 3 days to discuss the future of public safety communications. The variety of delegates included public safety practitioners, policymakers, academic researchers, industrial experts and other interested stakeholders.

Participants were provided with the latest updates related to the future of first responders and a European-wide perspective was further presented. In addition, we had the different presentations from representatives in South Korea and Australia, contributing this way to a diverse and productive exchange. The conference also covered hot topics in the area of public safety communications including the future of control rooms and 5G, and the use and limits of innovation for security and safety communications.

Overall, the PSCE conference provided a platform to get informed on PSCE activities, also fostering effective interactions between public safety actors and the user, industrial and research communities.

The conference in Brussels focused on the following questions:

- Next Generation Control Room:
- Use of Satellites during Critical Situations
- Future First Responders - An international perspective
- 5G

The conference also featured three presentations from the European Commission (DG Connect; DG Home), a presentation from 5GIA and a presentation of the E2mC project. This diverse programme led to interesting debates, roundtable discussions, and networking possibilities.

## Presentation stands

Stands were set up and lasted throughout the conference. Participants had the opportunity to actively interact and ask questions during the coffee breaks.

Barbara Percini together with Amudha Ravi Shankar (University of Geneva) presented a stand on the E2mC project which deals with the integration of social media analysis and crowdsourced information within both the Mapping and Early Warning Components of Copernicus Emergency Management Service. The purpose of the new Copernicus Witness Service Component is to improve the timeliness and accuracy of geo-spatial information provided to Civil Protection authorities, on a 24/7 basis, during the overall crisis management cycle and, particularly, in the first hours immediately after the event.

In the stand, visitors were especially interested on watching a demo which served as a visual example of what a real case scenario would be like and the role of Social media analysis.

Monika Büscher and Xaroula Charalampia Kerasidou, representing the University of Lancaster, introduced the isITethical project through a game. The aim was to have ethical conversations and to foster cooperation supported by this exchange-game. Visitors had the opportunity to interact in an informal way, getting to know the goals of the project by playing with each other and exchanging good practices.



Barbara Pernici and Amudha Ravi Shankar



Monika Büscher (left) and Xaroula Charalampia (right)

The conference was kicked-off by a short word and a warm welcome from Mr. Blaha, PSCE President, and an introduction of Jorge Pereira, DG CONNECT.



Malfred Blaha



Jorge Pereira

## Presentation from the European Commission - DG Connect

Jorge Pereira (European Commission) gave an overview on the current challenges and future perspectives of 5G for PPDR and introduced the 5G Action Plan of the European Commission.

The EC intents to eventually supplement current PPDR systems adding broadband as well as real time capabilities as soon as possible. Current PPDR systems are here to stay, but well needed advanced services (broadband and real-time) are lacking. Advanced services/capabilities can start being deployed by using LTE-based solutions to allow for testing and validation, as well as timely integration with Command and Control systems. Shared solutions, relying on commercial networks, should be considered and 5G-based PPDR solutions would require European-wide commitments to achieve the necessary economies of scale. PPDR availability and reliability requirements could possibly justify co-financing of the extended infrastructure.



## Focus 1. Use of Satellite during critical situations

**Improving Rapid Mapping with the integration of social media and crowdsourcing, the E2mC project – Barbara Pernici, Politecnico di Milano**

E2mC project aims at demonstrating the technical and operational feasibility of the integration of social media analysis and crowdsourced information within both the Mapping and Early Warning Components of Copernicus Emergency Management Service. The involvement of social media and crowdsourcing communities will foster the engagement of a large number of people in supporting crisis management; many more citizens will become aware of Copernicus.

**Crisis Connectivity Charter: improving communications – Simon Gray, EUTELSAT**

Mr. Gray provided an overview of the Crisis Connectivity Charter. 8 Satellite fleet operators have agreed to work together to supply emergency satellite communications for the Emergency telecommunications Cluster (ETC) which represents all UN and NGOs involved in disaster relief,

coordinating their communication requirements. This is the first time an industry sector has combined to pledge concrete support (Equipment and bandwidth) to the UN and other the humanitarian sector as a whole. The satellite industry is therefore ahead of logistics, Silicon Valley, big pharma, etc. in its commitment to aiding humanitarian relief.

### How Galileo could provide Emergency warning service - Uberto Delprato, IES Solutions

Mr. Delprato presented "GRALLE, an EU initiative for a GALILEO-based Emergency Warning System". GRALLE is an initiative from the EU aimed at studying a service based on the GALILEO satellites for the world-wide delivery of alerts. The major features of the service are the ability to reach the population with low-latency, with precise geographical targeting and without the need for being connected to the Internet. The presentation covers the GRALLE concept, its current status and the outlook for a future roll-out of the service.



Barbara Pernici



Simon Grey

## Focus 2. Future First Responders – European and International perspective

### Future public Safety in Australia – Geoff Spring, University of Melbourne

Geoff Spring is a Senior Industry Advisor in the Centre for Disaster Management and Public Safety which is located within the University of Melbourne Australia. Mr. Spring provided an overview of the mission critical public safety communications ecosystem in Australia with a focus on the need for countries to share information and lessons learned for each component of the ecosystem and its overall strategic direction.

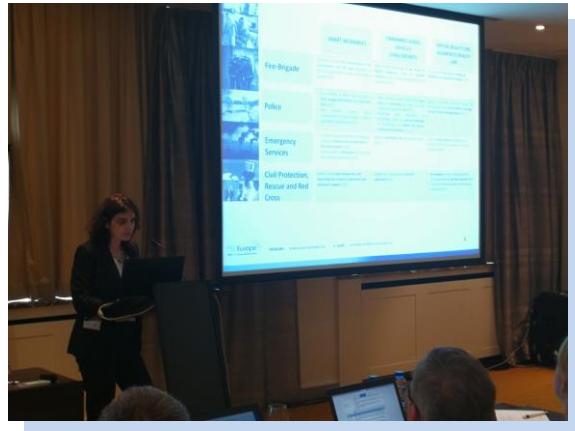
### Security at the South-Korean Winter Olympics – Changho Ryoo, Korean Telecommunications Technology Association

The presentation "General Information on Public Safety LTE matters of Korea" focused on activities for PS LTE communications during the winter Olympics period and future deployment plan. The Republic of Korea selected LTE as the communication system for public safety (PS-LTE), railway

safety (LTE-R) and maritime safety (LTE-M) and will co-exist and integrate among 3 kinds of LTE systems. Also, briefly touched the Safe-net forum in Korea.

### Innovation: what are the most wanted new solutions to improve Europe PPDR capabilities? Marie-Christine Bonnamour, PSCE

Ms. Bonnamour gave an overview of the results from the Survey on Technologies performed in February 2018. PSCE will prepare a White Paper in September presenting more in depth the results of the questionnaire.



Marie-Christine Bonnamour

### International Forum to Advance First Responders Innovation: What are the global trends? – Philippe Quevaupiller, DG Home

Mr. Quevaupiller gave an overview of the International Forum to advance First Respondent Innovation launched to the public at the International Association of Chiefs of Police conference in Chicago from October 24-26, 2015. The goal of this Forum is to assist First Responders across the globe in conducting their missions more effectively, safely, and efficiently by providing information that may influence the global market to develop affordable and innovative technology. The interest of the Commission in participating is supporting the competitiveness of the EU Industry in the First Responder area and ensuring the coherence of EU security research in the field of First Responders with the global efforts.



Philippe Quevaupiller

### **Applications of Blockchain in the PPDR sector - Urban Sedlar, University of Ljubljana**

Mr. Sedlar discussed how the Blockchain technology has emerged as a solution to a unique set of problems: distributed trust, increased transparency and tamper-proofing information storage. Even though its first use was in the financial domain (cryptocurrencies), the technology has much broader applications. In this presentation, the basic ideas behind blockchains and their main advantages will be explained, as well as some possible use cases in the PPDR ecosystem.

### **The isITethical? Exchange: Responsible Research and Innovation for Disaster Risk Management – Monika Büscher, Lancaster University**

Ms. Büscher introduced isITethical, a project that intends to support responsible research innovation in disaster risk management by co-creating a service and exchange of knowledge. The aim is to create a digital space for ethical conversations and to foster cooperation supported by an exchange-game. Such tool would boost interaction, a network, and promote the knowledge (s) of a diverse community of practitioners at a finger-click.

## **Focus 3. 5G**

### **Major steps toward European Interoperable Broadband for Public Safety: launch of BroadWay Pre-Commercial Procurement project – David Lund, PSCE**

Mr. Lund gave an overview on BroadWay, a project from which PSCE is a coordinator, underlining the common challenges on broadband mobile systems in Europe and the goals ahead; to improve collaboration between responders from different agencies and different countries and to enable mobility of these responders. In addition, Mr. Lund described the progress made from the one-year BroadMap project, which represented the interests of 15 European countries and prepared the ground for a Pre-Commercial Procurement activity, to the BroadWay project, validated by the European Commission to implement a pre-commercial procurement (PCP) to develop technologies to enable a pan-European interoperable broadband mobile system for public safety.

Mr. Lund invited all participants to follow the upcoming activities and announcements of public meetings through the [official website](#).

### **5G: what will be the benefit for Public Safety? Emmanuel Dotaro, 5G IA**

Mr. Dotaro gave an introduction on the the 5G Infrastructure Public Private Partnership (5G PPP), a joint initiative between the European Commission and European ICT industry (ICT manufacturers, telecommunications operators, service providers, SMEs and researcher Institutions). The 5G-PPP is now in its second phase where 21 new projects were launched in Brussels in June 2017. The 5G PPP aims at delivering solutions, architectures, technologies and standards for the ubiquitous next generation communication infrastructures of the coming decade.

## Distributed Autonomous Resilient Emergency Communication in 5G Framework (DARE) – Dr Deepak G.C, Kingston University

In this talk, the wireless network architecture in a typical post-disaster scenario will be discussed. The discussion also considers the cases, such as, isolated users, partially connected users and overloaded wireless base stations due to the natural disaster in which there will be limited power supply and broken network infrastructure. The possible solutions as Device-to-Device (D2D) communication, Internet-of-Things (IoT), advance network routing and computing algorithms including machine learning will be discussed. Furthermore, the deployment of drones in the disaster area to replace dysfunctional base stations for seamless wireless connectivity to improve Quality of Resilience (QoR) which will be tested overlay to the 5G Network Testbed.

## Other presentations

### Anabela Gago – Head of innovation and security – DG Home

Ms. Gago gave an overview of the relation between DG Home and other stakeholders. She underlined the importance of creating bridges between all, including industry and practitioners, which as a result could give more creative solutions. More specifically, practitioners would be crucial to take into account when coordinating new plans of action and other measures in the field.

Ms. Gago underlined:

"In this context, I am happy to see that this event will witness the launch of one of the first Pre-Commercial Procurement projects funded by H2020 under the Secure Societies work programme. The BROADWAY project will have the opportunity to narrow the gap between research and the market for the next generation of interoperable broadband radio communication systems for public safety and security."



Anabela Gago

## Next Generation Control room

### **What will control rooms look like in the near future? – Nick Chorley, Hexagon**

Nick Chorley referred to the role of the control room in our everyday lives. The public's expectation of 'normal' is not only changing the tools we use to perform regular control room functions but in some cases even the very meaning of control.

### **Future Control Rooms with Drone applications – Jan Ziegler, Frequentis**

UAVs have become a world trend and, thanks to its safe and easy operation, they have proven their value in different fields of application. Mr. Ziegler underlined that after the initial peak of high expectations it might be right time to explore ways to optimize the usage of UAVs while still improving public safety. Therefore, an approach to automated operation of UAVs is presented. On one hand, a general picture of the required technology, stakeholders, building blocks and legal aspects i.e. the upcoming EASA regulation enabling safe and legal operations and assigning clear tasks and responsibilities to the involved stakeholders (e.g. police or air traffic control). On the other hand, the use cases that support the investment of the public safety agencies with the target to identify the benefits and constraints of such model.

## **Committees**

In the course of dedicated sessions, the three PSCE committees (Research/Industry/Users) gathered to discuss current topics and future opportunities within their respective field of expertise. Furthermore, Monika Büscher (Lancaster University) took over the role of chair of the Research Committee, succeeding to Andrea Nowak (AIT).



Users Committee



Research Committee

## Opening of the International Wireless Leaders Forum

The conference was followed on the 24<sup>th</sup> afternoon and the 25<sup>th</sup> by an international workshop organized as part of the Public Safety Wireless Leaders Group.



David Lund and Marie-Christine Bonnamour in the center with Jeff Bratcher and Brad Morell from FirstNet USA

## Other activities

### 10<sup>th</sup> PSCE Forum Anniversary

This 18th edition marked the 10th year anniversary of the forum and was the perfect occasion for PSCE to engage in new and promising partnerships.



Manfred Blaha and Marie-Christine Bonnamour celebrating the 10<sup>th</sup> PSCE Forum anniversary

### **5GIA-PSCE Cooperation Agreement**

PSC Europe and 5G Infrastructure Association share a common interest in ensuring that 5G will bring the necessary developments to the security and safety communications for improving the activities of the PPDR community. During the PSCE conference, Manfred Blaha, PSCE president and Dr. Colin Willcock, 5G-IA Board PSCE, signed a Cooperation agreement to foster collaboration on 5G development.

The main activities of this partnership will include exchanging information between the two organizations on 5G developments, participating in industry events, congresses and joint promotional activities and contributing with their respective expertise to enhance the inputs of PPDR stakeholders and Verticals on the development and deployment of 5G.



Manfred Blaha and Emmanuel Dotaro after the signature

### **Networking Diner – Crowne Plaza Hotel Brussels**

