PSCE Conference in Rome, Italy

On 28-29 November 2012, PSCE organised another of its biannual conferences addressing the key topics within the domain of crisis communication. Hosted by the Istituto Superiore Antincendi (ISA - Fire Brigade Academy), the conference offered an interesting format, this time focused on indoor localisation, security aspects related to the organisation of large events as well as on critical information infrastructure protection.

The National Fire Corps (Corpo Nazionale dei Vigili del Fuoco - CNVVF) has the duty of assuring the urgent technical rescue and perform fire prevention services. It operates all over Italy, except Valle d'Aosta region, Bolzano and Trento provinces, with around 35.000 professional and volunteer units.

The event featured a diverse programme composed of "to the point" presentations as well as debates, in which leading experts and policy-makers answered interesting questions from the floor. The roundtable discussions and collaborative session between the committees offered interesting exchange of views with important conclusions.

The conference material is now available for all participants on temporary platform. PSCE Institutional Members have opportunity to download all presentations at any time from the restricted part of the PSCE website. The next PSCE biannual conference will be held in May 2013 in Brussels, Belgium.

Forum for Public Safety Communication Europe is to foster, by consensus building, excellence in the development and use of public safety communications and information management systems as well as to improve the provision of public safety services and the safety of the citizens of Europe and the rest of the world. The PSCE provides a common platform for researchers, industry and users to meet and network, learn about technologies used for public safety and influence policy makers at European level.

OPENING SPEECHES

- ❑ *09.00 – 09.10 – Welcoming – Helmut SCHWABACH , PSCE President*
- ❑ *09.10 – 09.30 – Opening speech by Stefano MARSELLA, Chief of the Provincial Fire Corps HQ of Perugia*

Helmut SCHWABACH

Stefano MARSELLA

The conference was inaugurated by Helmut SCHWABACH, PSCE President, who began by welcoming and thanking over 50 guests with different background for engaging in the dialogue within public safety communications domain. He expressed a gratitude to enormous commitment of users, industry and research communities with special accent on the concept of best practices sharing.

INDOOR LOCALISATION AND COMMUNICATION DURING EMERGENCIES

- ❑ *09.30 – 10.00 – Indoor location: case studies and operational requirements – Stefano MARSELLA, Chief of the Provincial Fire Corps HQ of Perugia*

- ❑ *10.00 – 10.30 – Technical challenges in Indoor Location of First Responders – Roberto SETOLA ,CAMPUS Biomedico & Federica PASCUCCI, Università RomaTre*

- ❑ *10.30 – 11.00 – Presentation of the REFIRE project – Uberto DELPRATO, IES Solutions*

Stefano MARSELLA, Chief of the Provincial Fire Corps HQ of Perugia, presented several case studies and operational requirements with respect to specific indoor localisation issues. Concretely, he talked about the fire in hospital in Perugia and in historical building in Rome; London fire and bombings; shipwreck rescue operations and underground train crash. The general requirements and specific indoor environments problems are summarised in the table below.

general requirements	specific indoor environments problems
scenario awareness	need of relying mainly on information provided by the emergency call
external communication	need of relying on communication network, when available
internal communication	exchange information only through direct contact
identification of operation site(s)	directions of people, when present in the environment, or emergency call info
location among operators	direct contact among operators
localization of operators from external environment	need of relying on communication network, when available
location of specific risk elements	directions of people, when present in the environment, or emergency provided by emergency call

Federica PASCUCCI (University of "Roma Tre") talked about technical challenges in Indoor Location of First Responders. They stated that one of the hot topic in the rescue scenario is the capability of the first responders to localize both themselves and injured people. Nowadays these tasks are performed using very simple and ineffective tools and exposing the first responders to extremely dangerous situations. In this framework, some interesting solutions have been developed by acquiring the results achieved in mobile robotic localization. However, it was mentioned that it is mandatory to consider the peculiarities of this application scenario in order to effectively exploit those solutions. Several localization systems for rescue indoor localization, which were the results of EU funded projects, were discussed after her speech.

Federica PASCUCCI & Roberto SETOLA

Presentation of the REFIRE project

The floor was then taken by Uberto DELPRATO (IES Solutions) who gave the presentation on the REFIRE (reference implementation of interoperable indoor location & communication systems for first responders) project, which aims to the adoption of effective location and communication services for indoor and deep-indoor emergencies and define a set of standards and protocols able to enable daily use of interoperable systems. REFIRE builds on the results of previous R&D projects and available industrial solutions to offer a solution ready to for the market, thus paving the way for a day-to-day use of effective location and communication services for indoor and deep-indoor emergencies. In a nutshell, the REFIRE project is aimed at tailoring existing capabilities to a specific package and at integrating them in a reference implementation. Such reference implementation will be developed around a non-proprietary standard for data and equipment interfaces, so that future interoperability of devices manufactured by any vendors across Europe is ensured (based on single solution RFID – Radio Frequency Identification).

CRITICAL INFORMATION INFRASTRUCTURE PROTECTION

- ❑ *11.20 – 11.50 – The EU policy, ENISA – Lionel DUPRÉ*
- ❑ *11.50 – 12.20 – The Research perspective – Paul SMITH, AIT*
- ❑ *12.20 – 12.45 – Trust Enabling Augmented-reality Support for information-Environments (TEASE project) – Jason NURSE, University of Oxford*

Lionel DUPRÉ (European Network and Information Security Agency) took the floor to present the origins, global issues, challenges and objectives linked to the initiative called "European Public-Private Partnership for Resilience" also known under the acronym "EP3R". It was established as a follow-up to the policy initiative on Critical Information Infrastructure Protection (CIIP) adopted by the European Commission on 30 March 2009 with the objective to identify key assets, formulate baseline requirements and coordinate needs and mechanisms to prepare for and respond to large scale disruptions affecting electronic communications. Some of the biggest challenges in this respect are market segmentation, regulatory fragmentation and the fact that there are currently only very few national public-private partnerships in operation. To overcome these problems, EP3R may help identifying pan-European cooperation needs; improve information sharing to reduce CII's operations, security, and business continuity costs; define useful mutual aid strategies, along with a supporting pan-European legal framework and recommend targeted actions where needed.

Lionel DUPRÉ

Paul SMITH

Paul SMITH, senior scientist at AIT and PSCE representative to the EP3R working group, presented research perspective on critical information infrastructure protection. One of the key messages of his speech is the fact that critical information infrastructure systems are becoming increasingly open and dependent on ICT systems, thus introducing potential new threats. Furthermore, he stated that smart grids represent a considerably more connected and open power grid, with significant potential impact, if successfully attacked. The "resilience control loop", which was also discussed, is illustrated in the scheme below.
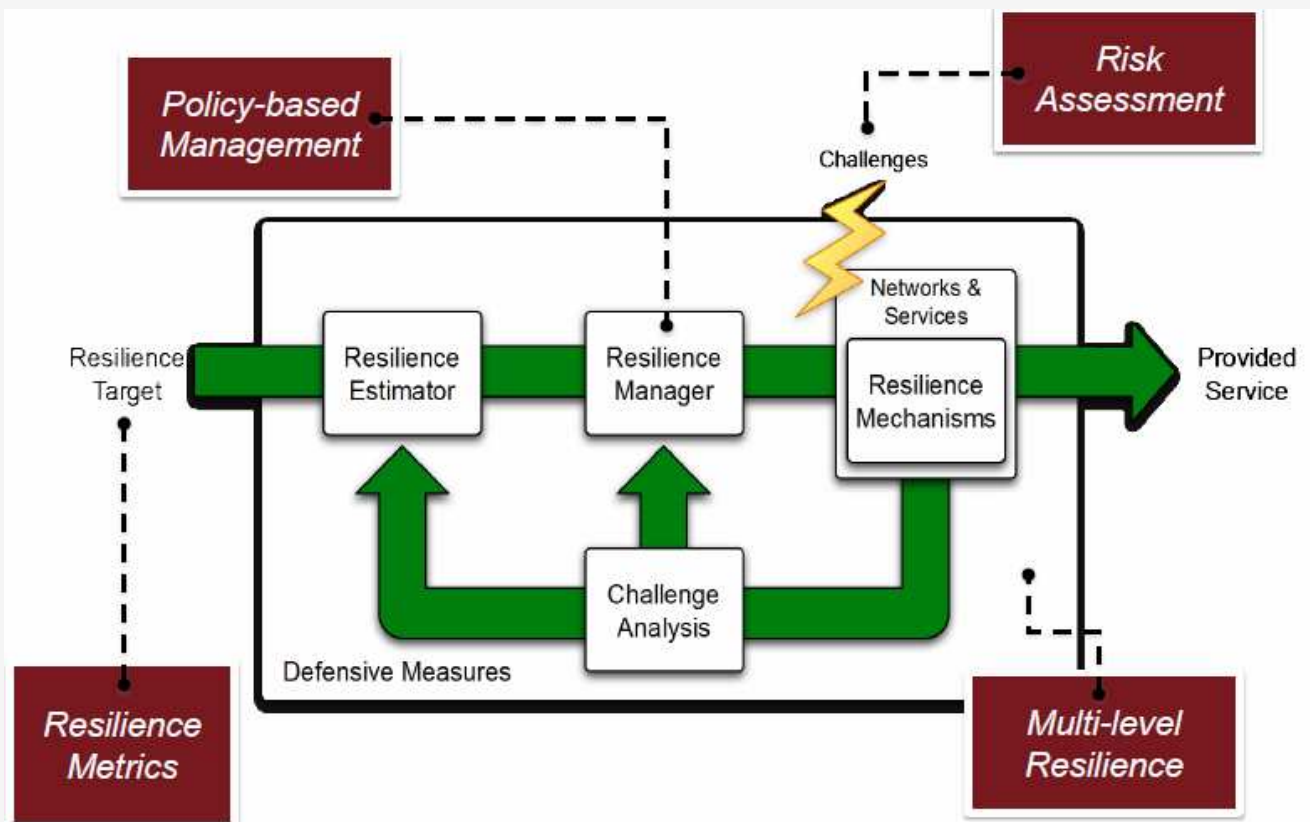
PSCE welcomed back the TEASE project (Trust Enabling Augmented-Reality Support for Information-Environments) who first showcased their novel trustworthiness communication technology during the social media session in the last PSCE conference in Helsinki. This time, Jason NURSE (University of Oxford) presented the prototype system with the view of obtaining feedback on the effectiveness of the technology. Situation awareness is of the outmost importance in crisis management. The TEASE project has developed innovative tools to assist crisis managers and other public safety users in assessing the confidence they should place in the reliability of the information that is presented to them via social media. More information about the project is available at www.tease-project.info.

Jason NURSE

TEASE experiment: Many participants had the opportunity to test and provide feedback during the 2 days of the conference

- ❑ *14.00 – 14.30 – Global Earth Observation System of Systems (BalkanGEONet project) – Roko ANDRICEVIC and Snjezana KNEZIC, University of Split*

- ❑ *14.30 – 15.45 – Collaborative session between the committees: Indoor localisation and communication during the emergencies*

After lunch, Roko ANDRICEVIC and Snjezana KNEZIC from the University of Split talked about "BalkanGEONet" project. Presentation focused on information about usage/application of geo-observation in disaster and security sector like critical infrastructure protection in general and organizations of large events. The main deliverable of the project is meta-data base (Permanent Network Facility, PNF) about players, users and various stakeholders as well as finished and on-going projects dealing with GEOSS, primarily covering whole Balkan countries (from Slovenia to Greece). It also covers main EU activities. The collected data are not oriented only to satellite images but to various geo-spatial techniques and methods, from in situ measurement to satellite usage. There is a plan to expand the data base and to develop a kind of self-sustainable product beyond the project life-time.

Snjezana KNEZIC

Collaborative session

The conference then continued with the **_collaborative session_** between the committees with the emphasis on indoor localisation and communication during the emergencies. Marcello MARZOLI (Istituto Superiore Antincendi) presented the case study entitled "Fire of an historical palace in Rome in 1999" which served as a basis for the discussions. Harold LINKE (HITEC) moderated the whole session. The session took place in the form of panel discussions with various experts and plenary session with all participants. The main outcomes of the discussions may are summarised in the following points.

 - ➢ *The security research projects should provide results that are useful to the needs of the end-users (Public Safety Organisations).*

 - ➢ *A better involvement of the end-users (Public Safety Organisations) is a key factor for the success of the EU funded projects.*

 - ➢ *The need to collect the end-user (Public Safety Organisations) requirements.*

 - ➢ *Regarding thematic priorities, the Public Protection & Disaster Relief community needs to get spectrum resources for mission critical broadband communications, including cross border missions.*

Marcello MARZOLI

Collaborative session

SECURITY ASPECTS RELATED TO THE ORGANISATION OF LARGE EVENTS

- ❑ *09.00 – 09.30 – Lessons learnt from the London Olympic Games – David WILSON, Metropolitan Police*
- ❑ *09.30 – 10.00 – UK Olympics – Experience from a Supplier perspective – Reinard VANLOO, Frequentis*
- ❑ *10.00 – 10.30 – Contingency planning for large events emergencies – Dusan ZUPKA, AIT*
- ❑ *10.30 – 11.30 – Interactive roundtable*

The second day of the conference was opened by David WILSON, Head of Project Managers, Directorate of Information, Metropolitan Police Service (London), who presented the lessons learned from the London 2012 Olympic and Paralympics games.The Metropolitan Police was at the forefront of the security operation for the London 2012 Olympic and Paralympic Games. The presenter was responsible for the delivery of the upgraded TETRA radio solution to all public safety partners operating during the event. The presentation examined the plan-execute-deliver phases of the project and focused on the post event learning. The Olympic Security Architecture is illustrated below.

The subject of UK Olympics was further addressed by Reinard VANLOO (Frequentis) and Dusan ZUPKA (AIT) who oriented their speech respectively on the experience from a supplier and research perspectives.


David WILSON   _Reinard VANLOO_   _Dusan ZUPKA_

UK Olympics – A Supplier Perspective on how to keep up with the customer

Several suppliers were involved in supporting the Metropolitan Police's Olympic Operations in the main Olympics "Special Operations Room". The Key Suppliers for this control room are Unisys for the Command and Control, Call Handling and Corporate GIS Systems, Airwave Solutions Ltd. (for the TETRA radio system) and FREQUENTIS for the Integrated Communications Control System (ICCS), CCTV control and Automatic Personnel Location System. For the Olympics and already large system (500+ Positions across 3 main sites) had to be expanded with 115 Positions, connectivity to an old and new TETRA interface technology and improved CCTV functionality (map selection of cameras and digital distribution in the control rooms). As a result of an open tender starting in 2009, FREQUENTIS won the expansion of the ICCS and CCTV system. The expansion was handed over to the MPS one year before the Olympics. During the Olympics all suppliers had 24/7 on site support personnel available to provide extra support. The 4 weeks of the Olympics and Paralympics were, from a support point of view, 'Business as Usual' except for the least expected event: Sewage Pipe burst in the main Control Room. Here the MPS's Business Continuity processes and training proved their worth: within one hour operations were moved to the back-up operations room without interrupting operations. After the event interviews with officers in the field showed that the move went almost unnoticed. FREQUENTIS had to replace 1 ICCS/CCTV working position, 8 screens and provide some short notice re-configuration. After three days the main control room was cleaned again so operations could resume from there. Lessons learned were that close co-operations with the customer and having the right people on site during the event ('Organised crisis') are essential for a successful delivery. FREQUENTIS is proud to have been involved in the exemplary delivery of the Olympics games by LOCOG and the MPS.
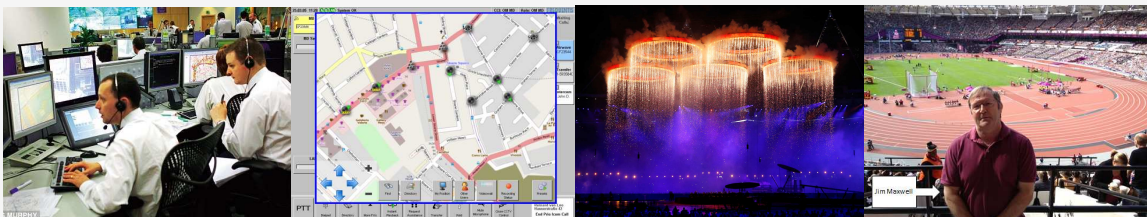
In his presentation, Mr ZUPKA (AIT) stressed that the importance of contingency planning related to large events has been often demonstrated during emergency situation and crisis occurring during large events. Within a broader framework of emergency preparedness, contingency planning is essential to ensure that security officers and first responders agencies are as ready as possible to manage future uncertainty by designing response and recovery actions in face of major emergencies. Contingency planning is a management tool to anticipate and solve security and safety problems that can arise during large events. Presentation defined an outline of contingency plan and critical steps in related processes.

COMMUNICATION CHALLENGES

- ❑ *14.00 – 14.30 – Inter System Interoperability for Tetra-TetraPol Networks (ISITEP), Claudio BECCHETTI, Selex*

- ❑ *14.30 – 15.00 – Broadband Data Communication – Harold LINKE (HITEC), Chair of the PSCE WG*

- ❑ *15.30 – 16.00 – User perspective on cross border cooperation in Alpine mountain rescue for Slovenia and Italy (ALPSAR) – Damiano GIORDANI, PCRAFVG*

- ❑ *16.00 – 16.30 – HELI4Rescue project – Introductory presentation to the Workshop to be held on November 30, 2012 – Uberto DELPRATO, IES Solutions*

Claudio BECCHETTI (SELEX Elsag) introduced the ISITEP project, which will start in early 2013 and which deals with European Interoperability in Public Safety, Emergency and Disaster Relief. He underscored that a transnational network where forces share technologies, processes and legal rules would greatly enforce security against crime and responsiveness to disasters. The experience shows that only a holistic "system" approach encompassing the joint integration of procedures, technologies and legal agreements may achieve feasible and effective solutions for PPDR interoperability on the field. The presentation introduced a framework to assess components required to implement interoperability at "system" level. Such framework is based on four pillars:

- The mission oriented structure encompassing procedures, functional models and legal agreements.
- The cross-national communication infrastructure integrating the national PPDR networks through inter systems interfaces.
- Multi standard terminals based on smart technologies empowered by PPDR specific applications.
- Supporting tools to assess business sustainability, technology needs and improve training and fast response.

Through the proposed framework, PPDR forces may achieve in the short term a cross-nation interoperability that leverages on existing technologies and is open to the benefits offered by emerging technologies in the long term. The framework will be experimented in the ISITEP project financed by the European Commission in the Seventh Framework Program.

Claudio BECCHETTI   *Harold LINKE*

Consequently, Harald LINKE (HITEC) gave the presentation on the latest status of the work on Broadband Communication for Public Safety Service of both groups. A Broadband Working Group was established in the PSCE Conference in Warsaw. Its goal is to create a roadmap and recommendations for LTE usage by public safety organisations. The PSCE Working Group is cooperating with a Working Group for Critical Communication and Broadband recently set up by TETRA Critical Communication Association, a PSCE's partner.

Damiano GIORDANI (PCRAFVG) provided a user perspective on cross border cooperation in Alpine mountain rescue for Slovenia and Italy. He explained that the Friuli Venezia Giulia Region (FVG) has two State borders characterized by a mountainous environment. In this area, in the recent years, many civil protection emergencies, as floods, wildfires, Alpine rescue missions, occurred and this area represents one of the most seismic zones of FVG and Slovenia. A protocol regarding the cooperation between the civil protection services signed on January 18th, 2006 between FVG and the Republic of Slovenia improves the collaboration of both countries in case of civil protection emergencies. In November 2006 a similar Protocol was signed between FVG and Carinthia Region (Austria). The aim of is to improve the sharing of information and guarantee the mutual faster rescue in case of the emergencies. This agreement authorizes in a very simply way the crossing of rescuers and rescue vehicles (ex.cp helicopters) from both sides in case of disasters. The agencies involved in management and intervention in emergencies are different at local level as on the international level. The PCRAFVG is developing tools to support the decision makers to an efficiency use of resources and an integrated cross-border sharing data that permit to all the actors involved to have the scenario of rescuers in a common real time way. The coordination of actors involved in management of emergencies is the focus point to guarantee a fast and efficiency response in case of emergency. In this way the Civil protection of Friuli Venezia Giulia participates in the EU project ALPSAR (Alpine Search and Rescue Slovenia to Italy) which detailed description is available at http://www.alpsar.eu/.

Damiano GIORDANI   *Uberto DELPRATO*

At the end of the conference, Uberto DELPRATO (IES Solutions) presented the HELI4Rescue (Heavy Payload Helicopter for Last Mile Rescue) project which aims to give Civil Security operators the possibility to define requirements for future large VTOL and VSTOL air transport systems (as Future Transport Helicopter, Large Size Airship and Transport Unmanned Aircraft System) for carrying heavy loads to crisis sites (last mile) during all the phases of the emergency cycle, with particular regard to the response and recovery phases. It investigates in particular the deployment of such systems within emergency scenarios. HELI4Rescue will provide those civilian driven results as inputs to future VTOL/VSTOL aircraft development programs. A broad range of European Civil Security actors will be involved in developing appropriate requirements to shape VTOL/VSTOL air transport solutions to be suited to master large emergencies as encountered in a European context and beyond. More information on the HELI4Rescue project is available here: http://www.heli4rescue.eu.

For more information about this conference, please contact secretariat@psc-europe.eu.

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