



Joint Research Centre

1st ERNCIP Conference

“good practices, better solutions”

JRC, Ispra (Va), Italy
Auditorium building 58c
December 12nd and 13th, 2012

Biographies and Abstracts



Joint
Research
Centre

The mission of IPSC is to enhance safety and stability of the European society on the basis of an agreed EU agenda by creating scientific results and turning them into measurable impact. Based on a combination of advanced ICT and engineering expertise, IPSC provides European policy makers with scientific and technology advice on issues relevant to safety, security and stability within and outside the EU. Due to the horizontal nature of its work, the IPSC closely collaborates with a large number of European and international stakeholders from different expert communities.

European Commission
Joint Research Centre
Institute for the Protection and Security of the Citizen

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ERNCIP Project

The European Reference
Network for Critical
Infrastructure Protection

The European Reference Network for Critical Infrastructure Protection (ERNCIP) is established under the umbrella of the European Programme for Critical Infrastructure Protection.

Our mission is to foster the emergence of innovative, qualified, efficient and competitive security solutions, through the networking of European experimental capabilities.

ERNCIP provides a framework for CIP-related experimental facilities and laboratories to share knowledge and expertise, and to harmonise test protocols throughout Europe, aiming at improved protection of critical infrastructure in the EU against all types of threats and hazards.

ERNCIP Strategic Goals:

- Improve the protection of critical infrastructure in the EU
- Support the development of the EU's single market for security
- Identify gaps in EU security product testing capabilities

Core Activities of ERNCIP:

- Initiate and supervise Thematic Areas
- Develop and operate the ERNCIP Inventory



ERNCIP Inventory

<https://erncip.jrc.ec.europa.eu>

The ERNCIP Inventory is a free-to-use search tool for open-source information on European security experimental and testing facilities.

The Inventory holds profiles of CIP-related experimental and testing facilities across the EU, containing:

- Basic information about the facility ;
- Services offered / Experience / Competencies / Accreditations;
- Available experimental / testing equipment;
- Contact points for potential customers.

The Inventory aims to help all types of critical infrastructure stakeholders (e.g. government authorities, infrastructure operators, and research institutions) to identify and make contact with CIP-related experimental expertise located in the EU and partnering countries, when they have a need for:

- Specific knowledge or expertise on CIP security-related problems;
- Certified solutions to CIP security-related problems;
- Research partners to conduct CIP-related experiments, or to form partnerships to bid for EU funded projects.



Thematic Groups

ERNCIP Thematic Groups
working objectives

Resistance of Structures against Explosions

Guidelines for harmonizing test procedures of structural elements, starting with resistance of glass against far-field blast loading.

Industrial Automated Control Systems incl. Smartgrid

Current priorities are to identify the barriers to certification and testing of IACS, including the analysis of existing cyber security testing facilities for IACS and Smart Meter components, and consideration of how to reduce the risks to cyber security from human factors.

Resistance of Structures against Seismic Risks

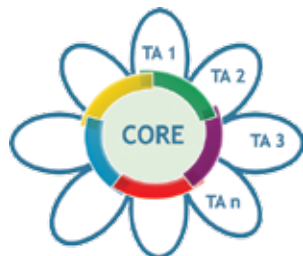
Common qualification of research infrastructures on earthquake engineering, including implementation and maintenance of a Distributed Database of test results

Aviation Security Detection Equipment

Assessing existing test methodologies for suitability for a future EU certification system; survey of test procedures used today; and state-of-the-art review for explosive trace detection.

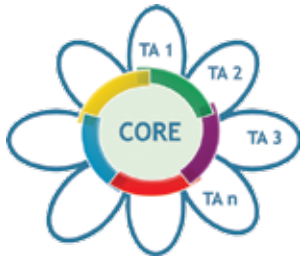
Explosives Detection Equipment for non-aviation contexts

Defining EU needs for explosives detection for mass land transport, marine transport, large public events etc., analysis of available technologies, first elements of a European common test methodology for non-aviation contexts.



Thematic Groups

ERNCIP Thematic Groups
working objectives



CB Risks in the Water Sector

Harmonizing test methods of innovative and rapid alarm systems and screening techniques, which make it possible to quickly identify changes to drinking water quality after an incident.

Video Analytics and Surveillance

The work programme is now under construction, and is expected to include assessment of the value of harmonised performance standards across various security solutions involving video surveillance.

Applied Biometrics to CIP

The kick-off meeting is planned for December, and will consider test harmonisation possibilities from use of biometrics for security solutions, such as building access security, border control, and facial recognition.

Agenda

9:00 Conference opening:

- Stephan Lechner, Director IPSC, JRC
- Eva-Maria Engdahl, DG Home

9:15 About ERNCIP - Naouma Kourti, ERNCIP project manager, JRC

9:30 European security standardization and certification, Hans-Martin Pastuszka, DG Enterprise

12th December 2012 - Session I:

Common test protocols for security solutions

Dr.-Ing. Alexander Stolz, Session Chairman

- *How to test security solutions – with or without standards?*
- *How could we agree on common test protocols in the EU?*
- *Unit test vs. system tests: what conclusions can (not) be drawn after testing a singular element of a security system?*

9:45	Security standards at NIST Dr. Richard Cavanagh, NIST Special Programs Office
10:05	The development of performance standards for the evaluation of video analytics systems , Adam Nilski, Home Office, UK
10:20	Defining Objectives for New Regulations to Support the Management of the Human Factor within Video Surveillance Lucio Tirone, ASTER
10:35	Coffee break
10:55	Protection of Water Resources and Supply Infrastructures - opportunities for innovation in water ecoindustries? Dr. Bernd Manfred Gawlik, JRC
11:10	Standardization – experiences and needs in water safety Ramona Lugosi, Transdanubian Regional Waterworks Corporation
11:25	Creating a cost efficient Pan European security solution validation and testing regime, the industry perspective Perrine Gueroult, Smiths Group
11:45	Meeting standards for building products against blast, manual attack and ballistic threats – manufacturers perspective Roger Cleave, Hamilton Erskine
12:00	Common test protocols for detection equipment Michael Hill, Bundespolizei Lübeck
12:15	Lunch

Agenda

12th December 2012 - Session II: EU and International testing standards for security solutions

- *What does it take to make a testing standard? How the EU could benefit from it? (how the EU research community and industry benefit?)*
- *Standards at national, European and international level – what objectives do we have in harmonization?*
- *What are the main drivers of the standardization?*
- *How could we improve time-to-market?*
- *Harmonization in Europe: would we like to sell the products world-wide?*
- *Do we need European solutions? Do international standards drive down the costs?*
- *Challenges in the communication of test results (confidentiality of test results issues).*

13:45	Overview of JRC's standardization activities Peter Churchill, JRC
14:00	An overview of the current status of international security standards Bert M. Coursey, ISO Strategic Advisory Group-Security
14:20	European Standards - solutions Ashok Ganesh, CEN/CENELEC (European Electrotechnical Stand)
14:40	Airport security testing standards Rad Olszewski, DG HOME
15:00	Standardization of security technologies: the French initiative on CBRN-E detection, Laurent Olmedo, CEA
15:15	Coffee break
15:35	ICS and Smart Grids Security Standards Sandro Bologna, Associazione Italiana Infrastrutture Critiche
15:50	How standards help assure critical systems – lessons from standards-led testing of biometric solutions Marek Rejman-Greene, Centre for Applied Science and Technology, Home Office, UK
16:05	Roundtable discussion: Development of testing standards and common test protocols in the EU – how ERNCIP can contribute? Moderator: Dr. Alois Sieber, Animator: Luigi Rebuffi, EOS
19:00	Dinner

Agenda

9:00 Opening of the 2nd day
Naouma Kourti, JRC

13th December 2012 - Session III: EU-wide certification and accreditation for security solutions

Mr François Murgadella, Session Chairman

- *What is the value of conformity assessment activities (certification, inspection and testing)?*
- *What should be certified? The whole system? Personnel?*
- *How can we make the certification process more cost efficient?*
- *Certification = security? Can certification give us the sense of security?*
- *What is the value of accreditation and what can it provide?*

9:05	The added value of accreditation for testing, inspection and certification activities Dr. Paolo Bianco, Accreditation body of Italy
9:20	Water Supply Security
9:35	SecurEau—Security and decontamination of drinking water distribution systems following a deliberate contamination Dr. Sylvain Fass, Université de Lorraine
9:50	Qualification of the European large research testing facilities Maurizio Zola, P&P LMC – Seriate BG Fabio Taucer, JRC
10:10	The value of blast resistant testing, standardization and certification Ans van Doormaal, TNO
10:30	Coffee break
10:50	Experience in accreditation of safety and security related activities Christina Waddington, Finnish Accreditation Service
11:05	Is the whole system more than the sum of its certified parts? Dr. Francois Mesqui, Morpho Detection

Agenda

13th December 2012 - Session IV: Investments in R&D on security solutions

Mr Luigi Rebuffi, Session Chairman

- *What are the research investment topics where a common European approach is needed and how to make use of that?*
- *How to reach the decision makers and get (financial) support from them?*
- *How to maximize the future impact of the research investments?*
- *How could we better connect the research to the manufacturers and the industry?*
- *What are the expectations of the manufacturers from research labs?*
- *How ERNCIP could help to put research into practice?*

11:25	Maximizing future impact of standardisation & certification of R&D output Dr. Andre Hermanns
11:40	Building the bridge between practice and research by identifying the needs Jos Menting, Laborelec GDF Suez
12:00	Lunch
13:30	GAP analysis: from scenarios to needs in explosives detection Didier Poullain, CEA
13:45	Fostering the implementation of innovative technologies in aviation security Marie-Caroline Laurent, International Air Transport Association
14:00	Towards a European Infrastructures Simulation and Analysis Center Dr. Erich Rome, Fraunhofer Institute for Intelligent Analysis and Information Systems
14:20	Roundtable discussion: Possible roles of ERNCIP in supporting CIP related research Moderator: Neil Mitchison, JRC
Closing 15:00	Coffee and snacks

Stephan Lechner

Conference opening

Stephan Lechner

Director IPSC

Joint Research Centre

European Commission

Biography

Dr Lechner is the Director of the Institute for the Protection and the Security of the Citizen (IPSC) at the European Commission's Joint Research Centre (JRC). The IPSC is located in Ispra, Italy and employs over 300 researchers on technical and scientific security aspects of various sectors (buildings, networks, financial systems, society) crisis management, maritime security and new Information Technology. Dr Lechner's background is in mathematics and computer sciences and he holds a PhD in cryptography.

Before joining the European Commission, Dr Lechner used to be Global Department Head for Security Research at Siemens Corporate Research from 2002 to 2007. He worked as head of Corporate Security and as IT Security in the telecommunications sector in Germany from 1993 to 2002 and started his professional career as network security researcher at Siemens in 1989.

Dr Lechner was member of the European Security Research advisory Board (ESRAB) and Member of the Permanent Stakeholders' Group of the European Network and Information Security Agency ENISA. He was also chairman of the Secure IST Advisory Board for the respective co-ordination action in Framework Programme 6.

He used to work in European Standardisation in ETSI and ECMA and holds an active CISSP (Certified Information Systems Security Professional) qualification.



Eva-Maria Engdahl

Conference opening
Eva-Maria Engdahl
Head of Sector
DG Home
European Commission



Biography

Eva-Maria Engdahl is currently Head of the Sector on Protection against Terrorism at DG Home Affairs, responsible for areas such as Critical Infrastructure protection, CBRN and Explosives security since spring 2007.

Before this, she worked for five years in security R&D in DG Enterprise & Industry. She was there, among other issues, responsible for projects and activities involving first responders in Crisis Management and CBRN, as well as in charge of ethical and societal aspects of security research.

She has a long previous experience in research policy and management of EU research funds with eleven years in different positions in DG RTD, as science attaché at the Swedish Perm Rep in Brussels, and before that as Head of International relations at a Swedish research council.

Ms Engdahl is an economist and has also a degree in political science.

Naouma Kourti

About ERNCIP

Naouma Kourti
ERNCIP project manager
Joint Research Centre
European Commission

Biography

Naouma Kourti studied engineering in the Technische Universitaet Berlin.

She joined the European Commission's Joint Research Centre in 1996, working in the field of nuclear safety. In year 2000 she was nominated Action Leader of the FISHREG action, which was focusing on developing monitoring and control techniques against illegal fisheries. In 2008 she was nominated Task Force Leader of the GMES Task Force and in 2009 Task Force Leader of ERNCIP.

In October 2012 she was nominated Action Leader of JRC's ERNSYS Action, which includes the ERNCIP Project. Naouma Kourti has produced important peer-reviewed publications and a great number of scientific reports in all the fields she has been active.



Hans-Martin Pastuszka

European security
standardization and
certification
Hans-Martin Pastuszka
DG Enterprise
European Commission



Biography

Hans-Martin Pastuszka is a Policy Officer at the European Commission, Directorate-General for Enterprise and Industry, Unit G3 for Security Research & Industry, since 2012. Within this function, he is responsible for the implementation of the “Programming Mandate addressed to CEN, CENELEC and ETSI to establish security standards” (M/487), and the respective elements of the recently issued Commission Communication on the “Security Industrial Policy - Action Plan for an innovative and competitive Security Industry” (COM(2012) 417).

Abstract

The EU security market, which is predominantly an institutional market, still is a highly fragmented one. This is undesirably impacting all security sectors, e.g. with limited or no interoperability between technologies used and varying performances of services and applications. To overcome this situation, the European Commission has identified in its recent Communication on the “Security Industrial Policy – Action Plan for an innovative and competitive Security Industry”, among others, the areas of CBRNE, border security and crisis management as priorities to be addressed by the European Standardisation Organisations with tailored standardisation programmes in the coming months. Further, the establishment of EU harmonised certification systems for airport screening equipment and alarm systems will be pursued. The presentation will provide an overview on the relevant actions and the planned way ahead, and will indicate where ERNCIP could contribute.

Alexander Stolz

Biography

Dr.-Ing. Alexander Stolz studied civil engineering at University of Wuppertal and wrote his doctoral thesis about mobilization of bedding stresses in granular soil at the Professorship for Geotechnique.

As head of the R&D group Security of Structures in the department Safety and Protective Structures (Fraunhofer EMI) he is specialized in the experimental investigation and numerical modeling of materials, components and structures under dynamic loads.

Additionally, he is substantial experienced in the contribution and management of national and European research projects. Furthermore he has been appointed as the coordinator of the Thematic Area “Resistance of structures to explosion effects” within ERNCIP.

Chairman Session I:
Common test protocols
for security solutions
Dr.-Ing. Alexander Stolz



Richard Cavanagh

Security standards at NIST
Dr. Richard Cavanagh
National Institute of
Standards and Technology
Special Programs Office



Biography

Dr. Cavanagh is the Director of NIST’s Office of Special Programs. He is responsible for coordinating and providing oversight of research that supports homeland and national security programs, and assuring that the research is congruent with NIST’s research capabilities and overall programmatic priorities. He joined NIST in 1979 after obtaining his Ph.D. in Physical Chemistry from Harvard University. He pursued an active research career in Surface Science, using state-selected and time-resolved laser diagnostics to examine the surface dynamics of small molecules. He currently serves as the Chairman of the Versailles Project on Advanced Materials and Standards (VAMAS).

Abstract

NIST is the US measurements standards laboratory and our program contributes to many US and International organizations in the development and application of security standards. NIST scientists contribute to development of standards in fields such as CBRNE detection, biometrics, cyber security, earthquake protection and blast resistance of structures. This concise overview of efforts will touch on NIST services ranging from measurement R&D to reference material development, documentary standards engagement, and laboratory accreditation.

Adam Nilski**Biography**

Adam Nilski is a member of the UK Home Office Centre for Applied Science and Technology (CAST). For the last 4 years he has been a leading member of the Imagery Library for Detection Systems (i-LIDS) project, working as the project manager. Adam has a broad experience in machine vision, from detection, performance evaluation, developing user requirements, design and implementation of trials through to data analysis and training. He also worked as a staff officer for the Head of the UK Home Office Science arm. Adam is also the deputy co-ordinator of the Video Analytics and Surveillance Thematic Group, and has been involved as an end user representative on a number of EU FP7 projects.

Abstract

CAST, in partnership with the UK Centre for the Protection of National Infrastructure, has made a major investment in performance standards for video analytics for a wide range of end user applications. This has led to the creation of the Imagery Library for Detection Systems (i-LIDS) project that provides end users with video for use in the development and evaluation of video analytics systems for a wide range of end user scenarios, including perimeter security, the detection of abandoned baggage, tracking of targets across multiple cameras and thermal imagery. CAST is also looking at wider aspects of performance measures, including measuring the relative performance of video analytics and human operators, and the effect of video compression on the performance of automated detection systems.

The development of performance standards for the evaluation of video analytics systems

Adam Nilski
Centre for Applied Science and Technology
Home Office, UK



Lucio Tirone

Defining Objectives for
New Regulations to Support
the Management of
the Human Factor within
Video Surveillance

Lucio Tirone
ASTER



Biography

Lucio Tirone is co-founder and Engineering Manager at Aster S.p.A.

Starting from a background in software based electro-magnetics, he grew a field expertise of over 15 years in Systems Engineering activities related to large technological projects in the Defense, Aerospace and Transport sectors.

He is a Certified Systems Engineering Professional, and member of Chapter Italia of INCOSE, participates in several working groups related to the protection of Critical Infrastructures (AIIC, the Video Analytics & Surveillance TG of ERNCIP), and is a founding member of the Italian chapter of TIEMS.

Abstract

The use of Video Analytics & Surveillance for the protection of critical infrastructures is regulated differently in the EU countries.

A key factor limiting the effectiveness of VA&S is the lack of a common definition of high level objectives, technological requirements, reference validation scenarios and roles and responsibilities of the human operators.

The presentation addresses such topics, analyzing the limiting factors and providing suggestions in order to reassess goals and strategies and improve the overall effectiveness of VA&S for the protection of critical infrastructures.

Bernd M. Gawlik

Protection of Water
Resources and Supply
Infrastructures: opportuni-
ties for innovation in water
ecoindustries?

Dr. Bernd Manfred Gawlik
Joint Research Centre
European Commission

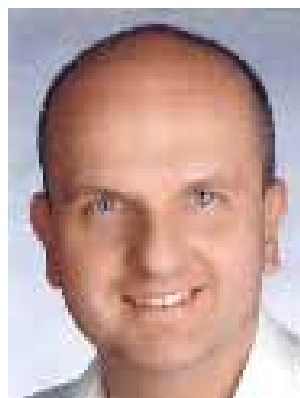
Biography

Dr. Gawlik is chemist and chemical engineer working in the JRC Institute for Environment and Sustainable, where he heads the JRC Action “Monitoring across Policies and Environmental Media”. The special focus of work is on the investigation of chemical pollutants in the context of EU environmental policies related to water. He is author of more than 100 scientific papers, book chapters and technical reports dealing with all aspects of chemical environmental monitoring.

He is also involved in the European Innovation Partnership on Water as well as Common Implementation Strategy for Water Framework Directive and related pieces of legislation.

Abstract

The lecture gives an overview on various challenges related to a quick and reliable detection of chemical stressors to water resources and supply infrastructures. Possible synergies between the current legal framework and the priorities highlighted by the European Innovation Partnership on Water are presented as opportunities for innovation in Critical Infrastructure Protection.



Ramona Lugosi

Standardization:
experiences and needs in
water safety

Ramona Lugosi
Transdanubian Regional
Waterworks Corporation



Biography

After her studies of environmental engineering with the main focus on drinking water technologies she performed research at the University of Veszprem Hungary and at Environmental Research Center Leipzig Germany.

Since 2003 she is working for Transdanubian Regional Waterworks (DRV) as a drinking water technologist. She participated from the beginning in the implementation of water safety plans at the company.

DRV – concerning operation area – is the largest supplier in Hungary. It operates state- and local authority owned regional and local waterworks and sewer systems.

Abstract

Water safety plan (WSP) is a management approach to minimize health risk of drinking water and ensure surveillance from catchment to consumer. Water safety plans – inherent to the characteristics of drinking water supply – are based on prevention and use of proactive risk management.

The application of water safety plans is promoted by the WHO. In Hungary the implementation and the revision of WSP is regulated.

Transdanubian Regional Waterworks was the first to implement WSP in Hungary in 2005. By now the company operates WSP on 22 water supply systems different size, water resource and treatment technology.

Roger Cleave

Biography

Roger Cleave is Director responsible for operations and development, including within the manual attack, ballistic and blast products. Prior to this, he served for 16 years as an infantry officer in the British Army. This included operational periods in counter-terrorist operations in the UK and Middle East. He undertook specialist technical and military training on a range of military weapons and protection systems including the use of explosives and explosive munitions. His final roles in the Army included Development of military and Government policy for the UK operations in Iraq and then the reductions of specialist counter-terrorist technical equipments in Northern Ireland.

Abstract

Customers are increasingly asking for dual accreditations, requiring a product to meet multiple threats. Given that testing is costly, and these costs need to be recovered, the existing array of standards makes dual accreditations complex. The fields of blast, ballistic and manual attack protection are standardised to different degrees. Whilst some standards are realistic, others are overly simplistic and some are outdated and can stifle innovation. The security market is not national or regional but is international so any progress needs to take a wider view.

Meeting standards for building products against blast, manual attack and ballistic threats: manufacturers perspective

Roger Cleave
Hamilton Erskine



Michael Hill

Common test protocols
for detection equipment
Michael Hill
Bundespolizei Lübeck



Biography

Mr. Michael Hill is currently Consultant at the Federal Police Technology Centre (FPTC) in Luebeck, Germany. His previous professional experience includes employment as Laboratory Supervisor and Project Manager at Clariant in Cologne for several years before relocating to Hamburg to proceed as Scientific Consultant at the Scientific Centre of the Federal Financial Administration. He completed his Ph.D. in Chemistry at University Muenster in 2004.

Abstract

With regulating, tendering and operating aviation security equipment the Federal Ministry of Interior and here in particular the German Federal Police takes responsibility not only for security but also for facilitation and efficiency.

This presentation describes the principles of the ECAC Common Evaluation Process according to the ECAC Common Testing Methodology showing its origin, structure and relevance to the German National Approval Scheme.

Peter Churchill

Overview of JRC's
standardization activities
Peter Churchill
Joint Research Centre
European Commission

Biography

Peter Churchill is an environmental scientist who has worked for over 30 years in academia, industry and the European Commission. His work initially specialised in land use management and soils, and quickly developed into the use of Earth observation data for a range of natural resources applications. He has led research projects and groups for many years in a wide range of subjects from satellite navigation through to the development of natural resources applications of satellite remote sensing. He has represented the European Commission in a number of international science groups. His current work focuses on strategic European science and technology issues analysing how to better assure good science in support of European policy, and how to assure that good science results in innovation. Peter Churchill is the author of over 100 scientific papers.

Abstract

The JRC is the in-house science service of the European Commission, and provides independent, evidence based scientific and technical support throughout the EU policy cycle. As part of this role the JRC provides scientific and technical support to the European standardisation system. Scientific input into the standardisation system is crucial if the correct balance between efficiency, productivity, protection of the environment and safety of the citizen is to be maintained. This role is formally recognised in the Commission Communication of June 2011, and covers a number of issues. The JRC undertakes pre-normative research, develops harmonised methodologies, contributes to standards committees, and prepares reference measurements and materials; in special cases the JRC also undertakes certification. This support is provided in a range of thematic areas including energy, transport, the digital agenda, safety and security (including nuclear issues) and consumer protection.



Bert M. Coursey

An overview of the current status of international security standards

Bert M. Coursey
ISO Strategic Advisory Group-Security



Biography

Dr. Bert Coursey is a Guest Researcher at the U.S. National Institute of Standards and Technology (NIST). He is also the Chairman of the ISO Strategic Advisory Group on Security. More recently he has held management positions in radiation dosimetry and served as Chief of the NIST Ionizing Radiation Division. Dr. Coursey has over ninety publications on radioactivity standards and applied radiation dosimetry. From 2003 to 2011, Dr. Coursey was on assignment to the U.S. Department of Homeland Security (DHS) as Chief of the Office of Standards in the Science & Technology Directorate. His office was responsible for the design and implementation of a national program for standards for homeland security.

Abstract

Following the terrorists attacks of 2001 in the USA, and the wave of subsequent attacks around the world, “security” has become a new focus for international organizations. In legacy technologies such as public safety and law enforcement, standards exist but renewed efforts are driving development of new standards. New threats such as weapons of mass destruction and cyber attacks present the need for entirely new suites of standards for technology products and standard operating procedures. This overview will provide a snapshot of the security areas under consideration in select national and international standards organizations.

Ashok Ganesh

European Standards:
solutions
Ashok Ganesh
CEN/CENELEC

Biography

Ashok Ganesh is Director Innovation at CEN CENELEC dealing with business development. Prior to that, he was Deputy Director, Standards support to the CEN and CENELEC standardisation work programmes. Mr Ganesh joined the (then) CEN Management Centre in 1999 working in a various sectors including aerospace, construction products and medical devices. He previously worked at the British Standards Institution (BSI) and was secretary to several CEN, ISO and national technical committees developing standards.

Abstract

Ashok Ganesh's will present an overview of the European Standardization System with an explanation of the CEN and CENELEC and the key attributes and benefits of European Standards including how stakeholders drive the needs for standards and give their participation.

He will also outline the CEN and CENELEC work programmes according to sectors and give some facts and figures, including about the development time for a European Standard and the process.

The presentation will explain the link between national, European and international standardization (Vienna and Dresden Agreements) and touch on the correspondence between European standards and the ERNCIP thematic groups.



Rad Olszewski

Airport security testing standards

Rad Olszewski

DG HOME

European Commission



Biography

Rad Olszewski presently serves as principal administrator in the counter-terrorism unit of the European Commission Directorate General for Home Affairs (DG HOME) with key responsibility for DG HOME policy development and implementation in the area of detection and risk assessments.

He is a subject matter expert on explosive materials detection and is coordinating the detection standards and research activities and programmes, in particular as regards innovative screening technologies. His responsibilities include counter terrorism input on aviation security matters and development of CBRN-E detection in different domains of public security and operational field trials.

During the period 2001-2010 he was responsible for development of Commissions aviation security inspection methodology and inspector training standards.

Abstract

Monitoring of the application and compliance with the EU aviation security regulations and procedures play an essential role in the aviation security. However, implementation of the so called routine testing processes do offer different challenges among EU Member States.

Innovation in concealments of explosives by terrorist groups underpin the importance to development and implementation of the protocols needed to measure the implementation of detection standards in operational environment. The presentation will highlight some of the key challenge areas and suggest reflections on ways forward.

Laurent Olmedo

Biography

Laurent Olmedo graduated from Ecole Nationale Supérieure de Chimie de Strasbourg (1980) as a chemical engineer. He joined the Military Applications Division (DAM) from the French Atomic Energy Commission (CEA) in 1982 as a research engineer in chemical and materials science.

In 2001, he was appointed as the manager of a R&D material science service (60 people) in CEA / Le Ripault facility near Tours.

Since 2005, Laurent Olmedo has been in charge of the coordination of the Global security research program, a new mission dedicated to CEA. This activity started with the French joint CBRN-E research program, awarded to CEA by French public authorities in 2005, which has led to numerous technology transfers of innovative technologies.

In addition, Laurent Olmedo coordinates the French action on standardization of CBRN technologies.

Abstract

The French standardization committee on security of citizen, led by SGDSN and AFNOR, includes a working group dedicated to standardization of security technologies, with a short term priority on CBRN technologies. This initiative aims at fostering the process of standardization of technologies, in the perspective of a rapid extension at European scale. It relies on the strong investment conducted in France, since 2005, in the field of CBRN-E R&D which has permitted to gather a wide panel of stakeholders (public, operators, industry,...) in a large set of programs.

Standardization of security technologies:
the French initiative on CBRN-E detection
Laurent Olmedo
CEA



Sandro Bologna

ICS and Smart Grids
Security Standards
Sandro Bologna
Associazione Italiana
Infrastrutture Critiche



Biography

Sandro Bologna received the degree in Physics from the University of Rome “La Sapienza”. He has more than 30 years experience with the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) and abroad, where he has covered different positions as Researcher, Head of Research Units, Head of Research Projects at national and international levels. At present (2012) he is the President of the Italian Association of Critical Infrastructures Experts (AIIC), and Experts Group Member of the European Reference Network for Critical Infrastructure Protection (ERNCIP).

Abstract

After a short introduction to the mostly accepted concepts of ICS/SCADA and Smart Grids, the presentation will cover some of the related standards, guidelines and recommendations in use or under development in Europe and in the USA. The intent of security standards is to ensure that all critical assets responsible for the reliability of the entire Electric System are conceived according to the principle of design for security. Smart Grid design and deployment must take into account the current cyber vulnerabilities in the ICS/SCADA. The situation is rather complex, with a proliferation of initiatives, standards, frameworks, that need to be aligned.

Marek Rejman-Greene**Biography**

Marek Rejman-Greene has been the Senior Biometrics Adviser at the Home Office since 2005 and is the Capability Adviser in Identity Assurance at the Centre for Applied Science and Technology at Home Office Science. He is an active member of the international standards community, in particular the ISO/IEC SC37 biometrics committee working group on biometric functional architecture and related profiles. Specific areas of interest include the cost-effective systems engineering of identity systems and aspects of usability and privacy management in government applications. In Summer 2012 he took on the role of coordinator for the ERNCIP Thematic Group on Applied Biometrics for CIP.

Abstract

Biometric systems have been under development for at least 40 years, but for most of that time, suppliers of biometric hardware and software were able to make extravagant claims about the performance of their products. Since the creation of the ISO/IEC standards committee SC37, and specifically, its Working Group 5, both suppliers and users have clarity on the meaning of key terms as well as agreed methods of testing and reporting on their results. SC37 works with SC27 on setting standards for testing the security of biometric products. The challenge now is to develop integrated testing approaches for biometric systems that are cost-effective, the results of which are transferable to other operational settings.

How standards help assure critical systems: lessons from standards-led testing of biometric solutions

Marek Rejman-Greene
Centre for Applied Science and Technology,
Home Office, UK



Alois J. Sieber

Roundtable discussion:
Development of testing
standards and common
test protocols in
the EU – how ERNCIP can
contribute?

Moderator:
Dr. Alois Sieber



Biography

Until April 30, 2012:

Head of Unit “Security Technology Assessment”, Institute for the Protection and Security of the Citizen (IPSC), Joint Research Centre.

Since 1986 with JRC:

- Responsible for a number of unique experimental facilities (remote sensing by means of electromagnetic waves)
- Since 1995 involved in effort to find advanced tools to make humanitarian mine clearance faster, safer and more cost-effective
- Since 2000 active in the field of security research, in particular regarding embedded sensor networks, secure communication, explosives and IED, protection of critical, networked infrastructure, and other topics.

He was chairman of the CEN BT WG 161 “Standards for Protection and Security of the Citizen”, chairman of WG on “Innovation” of the European Security Research and Innovation Forum (ESRIF) and represented JRC in Programme Committee on security research, responsibility of European Commission DG ENTR.

François Murgadella

Chairman Session III:
EU-wide certification
and accreditation
for security solutions
Dr François Murgadella

Biography

Deputy Head of the Development of Security Technologies Department for the General Secretariat for Defence and National Security (SGDSN).

He's in charge of the research, innovation and industrial policy for security domain in the SGDSN, whom assists the Head of French Government.

Previous recent positions:

- 2005 – 2012: In charge of R&D programs for Security Domain within the French Mod/ DGA .
- 2003 – 2005: Chairman of the CEPA2 (Common European Priority Area in WEAG organisation).
- 2001 – 2002: Head of R&D activities of semiconductor laser devices with Alcatel Optronics.

Education: Institute of Higher Education for Science and Technology (IHEST auditor 2009) .

PhD, Physics – Orsay University.

MBA – Paris Pantheon-Sorbonne University.



Paolo Bianco

The added value of accreditation for testing, inspection and certification activities

Dr. Paolo Bianco

Accreditation body of Italy



Biography

University of Turin, Degree in Industrial Chemistry in 1976

1978-1985: Centro Ricerche FIAT S.p.A.

1985-1999: Chemical Laboratory of the Chamber of Commerce of Turin.

1999: SINAL Sistema Nazionale per l'Accreditamento di Laboratori –General Manager of SINAL.

Since June 2009, Director of the Testing Laboratories Department of ACCREDIA

More than 100 papers, patents and contribution to congresses in the fields of environmental analysis, corrosion and protection of metals, preservation of cultural heritage and accreditation.

EA team member (testing).

Member of EA MAC and EA Laboratory Committee, Chair of the EA Laboratory Committee, and of ILAC AIC and MCC.

Abstract

The ERNCIP activities are widely spread over the safety/security issues, ranging from single tests to complex research.

The common issue is measurement that shall be traceable. The only way to give evidence of traceability is the calibration from NMI or accredited laboratories.

The conformity to ISO/IEC 17025 is mandatory, at least for tests related to notified bodies.

A guidance document on accreditation of research laboratories (T31:2010) has been already published by RvA, and another key issue is the application of the flexible scope accreditation.



Sylvain Fass

SecurEau: Security and decontamination of drinking water distribution systems following a deliberate contamination

Dr. Sylvain Fass
Université de Lorraine



Biography

Most of the research fields explored by Dr-Ing. Sylvain Fass were in relationship with water quality in drinking water networks.

- From 1991 to 2008, he was Project Manager in charge of research programmes. He has coordinated the SAFER UE-funded programme (2002-2006), on the “Surveillance and control of microbiological stability in drinking water distribution networks”;
- Since 2008 he is Research Engineer in the Université de Lorraine, France, coordinator of the SecurEau UE-funded programme “Security and decontamination of drinking water distribution systems following a deliberate contamination” (N° 217976).

Université de Lorraine: Research Engineer in the Partnerships Department.

Abstract

SecurEau (a European project for restoring distribution systems after deliberate CBRN attack involving 12 partners from 6 countries) has defined four objectives of research & development:

- tools for detecting water quality changes by combining generic unspecific and specific sensors for measuring abnormal signal variations, coupled with mathematical models for the optimal sensors positioning for continuous monitoring;
- models for rapid localization of the source(s) of intentional contamination;
- multistep strategies for cleaning the distribution system: pipe wall/biofilms/deposits and wastes ;
- analytical methods for confirming cleaning procedure efficiency.

M. Zola, F. Taucer

Qualification of the
European large research
testing facilities

Maurizio Zola
P&P LMC, Seriate BG



Fabio Taucer
Joint Research Centre



Biographies

Maurizio Zola is now an Independent Professional. He has working experience both as experimental research testing engineer and as a designer, having worked in PMN SpA – Ansaldo Group (1976), ISMES SpA – ENEL Group (1977 - 2000), P&P LMC Srl (2000 - 2008) for the seismic retrofitting of Russian-type Nuclear Power Plants and for the shock and vibration qualification of mechanical components and electrical equipment. Enrolled in the Council of the Chartered Engineers in Bergamo since 1978. Since 1984 expert of the TC 104 (Mechanical and Environmental Testing) of CEI. Since 2000 Expert of the Packaging Committee of UNI. Since 2001 Inspector for ACCREDIA. He published more than 60 technical papers.

Fabio Taucer is member of the ELSA staff since 2001 and is responsible for the co-ordination of RTD European Projects in the field of earthquake engineering. He has working experience both in research and industry, having worked at an international level in seismic design and retrofit of long span bridges. He has participated to several post-earthquake field reconnaissance missions, both in Europe and abroad. He is editor of two European reports on large-scale experimental facilities, has authored more than 35 papers on conference proceedings and scientific journals, and over 30 technical reports.

Abstract

The SERIES Project, funded by EC, addresses the qualification of European laboratories specializing in seismic engineering and structural testing of large scale structures. The aim of qualification is to provide reliability. A draft Common Protocol was developed, based on ISO 17025 together with EA 2/15 to obtain a ‘flexible scope’ accreditation, with technical annexes for research tests with Shaking Tables, Reaction Walls and On-site. The Common Protocol was calibrated by seven laboratories and it was proposed to EA as a basis for a guide towards the accreditation of Large Research Testing Facilities.

Ans van Doormaal

The value of blast resistant testing, standardization and certification

Ans van Doormaal
TNO



Biography

Ir. Ans van Doormaal is a project manager and senior scientist at TNO with more than 20 years of experience in explosion effects and protection. She has a masters degree in Mechanical Engineering from Eindhoven University of Technology. In 1991 she joined TNO to work in the research area of Explosion Effects and Protection. The research experience in this field is broad, ranging from numerical simulations (FEM) to experimental test programs, and from scientific projects to develop new models to practical applications in blast consultancy projects. The current focus is building protection. Ans is the blast consultant for the Dutch government, and she is the coordinator of the FP7-project SPIRIT, regarding building security.

Abstract

An explosion generates extreme loads normal structures cannot resist. Special designs are needed when a structure has to be blast resistant.

The blast resistance can be shown by experimental testing or by numerical calculations. In practice, usually a combination of these two approaches is used, because of the limitations of each.

Standardization and certification can be of help here, but only to a certain extent. It does not relieve the end user from his own responsibility.

By putting blast resistant testing in the context of critical infrastructure protection, the presenter likes to illustrate both the value and the limitations of blast resistant testing, standardization and certification.

Christina Waddington

Experience in
accreditation of safety and
security related activities
Christina Waddington
Finnish Accreditation
Service

Biography

Present position:

- Accreditation manager in FINAS, Finnish Accreditation Service,
- Experience in accreditation since 1987, lead assessor since 1989.

International activity:

- Active in EA European Cooperation since 1995.
- Chairman of EA Laboratory Committee 2008-2011, EA Team Leader for evaluation of accreditation bodies and member of EA MLA Committee.
- Member of ILAC technical committee 1999-2011, ILAC regional evaluator

Previous work experience:

- research in materials technology, manager of laboratory for chemical analysis

Education:

- MSc Chemical Engineering, Helsinki University of Technology

Abstract

Accreditation is the accepted tool for testing, inspection and certification bodies to show competence and conformity of results both in regulated and non-regulated areas.

Examples are: testing and inspection for nuclear safety, alarm systems, fire alarms and extinguishing systems, railway safety; certification of IT security, safety management, security systems.

The accreditation defines criteria for competence, resources and quality system. Common detailed procedures, test methods, inspection procedures or certification criteria, are necessary to obtain reliable comparable results. In rapidly developing areas, availability of widely accepted methods and procedures is essential.



Francois Mesqui

Is the whole system more than the sum of its certified parts?

Dr. Francois Mesqui
Morpho Detection



Biography

Dr. François Mesqui is Morpho Detection's Director of EU Affairs.

François joined Morpho Detection Inc. (formerly GE Homeland Protection and before InVision Technologies) in February 1997 as Vice President for Design Engineering leading the CTX9000 design and development program from inception to manufacturing through initial FAA certification. He was promoted CTO of InVision Technologies in 2000. In December 2002, he relocated back to France as VP Marketing Europe and acting Director Customer Services EMEA. Prior to Morpho Detection Dr. Mesqui led his Engineering Services Company Metropoly AG, based in Zurich, Switzerland, that prototyped many sophisticated control systems for the industry including the original LPA (Luggage Positioning Adapter) for InVision Technologies. Francois received his Diploma in Electrical Engineering in 1978 and a Doctorate in Technical Sciences in 1983, both from the Swiss Federal Institute of Technology (ETHZ), Zurich, Switzerland and was awarded the Prize of the Swiss Society of Biomedical Engineering in 1984.

Abstract

The EU regulatory framework for aviation security has the effect of piling up new measures onto existing ones to address emerging threats. Each measure specifies a combination of processes or specific technologies, which generally have to be individually certified to prove that they meet regulated security requirements. Unfortunately, actual combinations of equipment and processes do not necessarily result in optimized security overall. For instance, a poor combination of primary and secondary screening for liquid threats at checkpoint could result in a low rate of detection or unnecessary false alarms. It is paramount that regulators define stringent whole system KPIs, which will increase the performance requirements of individual components and operational procedures.

Luigi Rebuffi

Biography

Luigi Rebuffi: Nuclear Engineering at “Politecnico di Milano” (1984). PhD in Electronics at University Paris XI (1987). Researcher for EC and IAEA for development of high power microwave systems for ITER in Germany (1991). Responsible of R&D European projects and Thales Director for European Affairs.

In 2007 he was the founder and first CEO of the European Organisation for Security (EOS). He plays a strategic role in defining the mission and objectives of EOS; coordinates the implementation of the agreed strategy; supports and advises the 43 EOS Members. Dr Rebuffi plays a key role promoting public – private cooperation on security. He is an advisor on security issues to the Cabinets of several EC Commissioners, Members of the European Parliament. He is a Member of the Security Advisory Group on EU Security Research and President of the Steering Board of the French ANR for security research.

Session IV Chairman:
Investments in R&D on
security solutions
Luigi Rebuffi
EOS



Andre Hermanns

Maximizing future impact
of standardisation & certi-
fication of R&D
output

Dr. Andre Hermanns



Biography

Dr. Andre Hermanns is doing research about threats to critical infrastructures since 1997 at London School of Economics and Political Science.

Since 2008, he has been working in several German and EU security research projects. At TU Berlin he received his PhD in 2012 about standardisation and technology acceptance as instruments for establishing security technology lead markets.

In 2012, he joined EBS Business School as Director of Research and Head of section “Security and Innovation”. He was equally appointed as Director of the National Centre Aviation Security Research.

Dr. Hermanns acted as REA Evaluating Expert for the FP7 working programme “Security” in 2011. He is member of the German delegation in ISO TC 223 Societal Security and was appointed to the European Security Research Innovation Forum (ESRIF) in 2008.

Abstract

The standardisation of R&D output has proven advantageous both on the micro- and macro-economic level, such as augmenting technology transfer or technology acceptance. Though standardisation is politically not supposed to constrain international trade, it is increasingly regarded as an instrument of industrial policy, as defined in the 2007 EU Lead Market initiative. Its evaluation in 2011 however showed only a limited impact of standardisation. The concept of a European Security Label, brought forward by ESRIF in 2009, focuses a different context of industrial policy by standardisation, but could not be forwarded much since. The presentation will show how these two approaches can be optimised in order to maximize future impact of standardisation & certification of R&D output.

Jos Menting

Building the bridge
between practice and
research by identifying
the needs

Jos Menting
Laborelec GDF Suez

Biography

Degree in Technical Physics and Industrial Automation. Multiyear experience in conventional power generation in maintenance, engineering and commissioning. Feasibility study in India and a four year mission in Mid Americas, followed by a life time extension study for the Dutch power generation fleet. Currently working for Laborelec, GDF Suez as senior expert. Member of EU-ERNCIP, EuroSCSIE, Executive Board member of WIB and chairman of VGB-Powertech I&C working panel.

Abstract

Industrial world's reality and things discussed in Public Private Platform still show a gap. This gap, between the need for commonly usable best practices, varying from organizational structures and training to technical solutions and the direction for research where to go, can and has to be closed. Where it is now and where it should go needs to be bridged. For this research has to understand the situation and based on that, come out with practical tools.



Didier Poullain

GAP analysis:
from scenarios to needs
in explosives detection
Didier Poullain
CEA



Biography

Didier Poullain is graduated from Organic Chemistry school and is working at the French Alternative Energies and Atomic Energy Commissariat. He has lead the group working on synthesis and formulations of explosives for 10 years and is a senior expert in this field. In the explosive division, he is currently managing the program on the fight against terrorism for the validation and characterisation of the explosive threat and the detection. He is involved in CBRN-E programs at national and international levels. He is the coordinator of the European Network on Detection of Explosives (NDE). In ERNCIP project, he coordinates the thematic area on Explosives Detection outside aviation security.

Abstract

The Network on Detection of Explosives (NDE) was asked by the European Commission to make a detailed analysis on the GAP between scenarios of terrorist attacks and commercially available detection technologies.

The different steps of the study will be presented. Firstly more than 120 detailed scenarios were elaborated. All areas were covered from aviation security to critical infrastructures. Secondly, NDE made the analysis following an original methodology taken into account different parameters like detection or false alarm rate, cost, explosive quantity,... Thirdly results were distributed in 4 categories depending on the capability of the technology to mitigate the risk.

M. Caroline Laurent

Fostering the
implementation
of innovative technologies
in aviation security

Marie-Caroline Laurent
International Air Transport
Association

Biography

Marie-Caroline Laurent, IATA Assistant Director for Security & Travel Facilitation, Europe

Marie-Caroline joined IATA in 2011 as Assistant Director for Security & Travel Facilitation, Europe. Based in Brussels, she is responsible for the development and implementation of IATA security and facilitation strategy in Europe.

Prior to joining IATA, Marie-Caroline held various positions related to aviation and transport policy in the European Union. She worked in the European Parliament as an adviser to a French MEP on aviation issues and was manager for security and cargo at the Association of European Airlines.

Graduated in public administration and European policies, Marie-Caroline holds two master degrees from Sciences Po Paris and from the Catholic University of Leuven in Belgium.

Abstract

Aviation security solutions are developed in the strict framework of EU aviation security regulatory requirements. To cope with the future challenges faced by the aviation industry – increased traffic, evolving threats, increasing passenger convenience – the introduction of new technology solutions will have to be facilitated and supported by the regulators. Beyond building better bridges between R&D investments and users’ needs, stronger support to implement operational trials across Europe for new technologies is required to foster the implementation of innovative solutions in aviation security.



Erich Rome

Towards a European
Infrastructures Simulation
and Analysis Center
Dr. Erich Rome
Fraunhofer Institute for
Intelligent Analysis and
Information Systems



Biography

Erich Rome is a senior researcher at Fraunhofer IAIS. Since his diploma in Computer Science in 1983 he worked as a researcher. In 1995, he received a PhD in Engineering Science. His research interests include critical infrastructure protection and multi-sensory systems for security. He coordinated the EU projects MACS, IRRIS and DIESIS. He is a member of the ESF-COST Action “Intelligent Monitoring, Control, and Security of Critical Infrastructure Systems” and of the steering committee of the workshop series CRITIS. He has published numerous peer-reviewed publications and edited several books.

Abstract

Reaching or maintaining the required level of preparedness against service disruptions of Europe’s complex system of connected infrastructure systems requires adequate and fast adaptation to its on-going changes. Advanced modelling, simulation and analysis capabilities for exploring different courses of action, and appropriate consequence analysis based decision support would be needed for achieving preparedness, but are lacking in Europe and its member states. This talk presents work towards a European Infrastructures Simulation and Analysis Center that shall deploy the required capabilities.

Neil Mitchison

Biography

Neil Mitchison was appointed Head of the Security Technology Assessment Unit at the JRC in August 2012, having spent the previous 6 years as the European Commission’s representative in Scotland.

He had spent many years at the JRC previously, working on real-time computer systems for operator assistance, on the prevention of chemical and petrochemical accidents, on the dependability of computer systems, and on border control and biometrics.

He has worked on computer applications in the financial domain, both for private companies and for the European Commission. He has also been a radio and TV broadcaster, and has stood for election to both the European and the Westminster Parliaments.

Roundtable discussion:
Possible roles of ERNCIP
in supporting CIP related
research

Moderator: Neil Mitchison
Joint Research Centre
Animator: Peter Churchill
Joint Research Centre



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As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new standards, methods and tools, and sharing and transferring its know-how to the Member States and international community.

Key policy areas include: environment and climate change; energy and transport; agriculture and food security; health and consumer protection; information society and digital agenda; safety and security including nuclear; all supported through a cross-cutting and multi-disciplinary approach.