WSIS FORUM 2017

12 June - Geneva

Thematic Workshop

ICTs for Safety, Security and Disaster Recovery

(EC Medici Framework of Cooperation)

11:00 AM - 01:00 PM, 12 June 2017

Room A, ITU Montbrillant

Since its conception and first phase, held in Geneva, WSIS was characterized by its specific focus on “society” and the deep involvement of both stakeholders and civil society in the process: a citizens centred approach.

It was very evident to both technologists and humanists that such a revolution, likely to change significantly not only life but also society, cannot be managed by companies or governments only.

The idea to open the discussion about the impact due to new technologies and their future uses and developments to different actors ranging between

governments and civil society it was and still is greatly relevant and extremely positive.

Among the other positive effects, the WSIS outlined both threats and opportunities offered by the ICTs counterbalancing the too often abused trend of blind innovation technology trained.

Nowadays more than fifth teen years later, if our agenda really includes sustainable development goals, a multi-stakeholder multidisciplinary approach is needed in order to approach and positively solve complex problems, how to foresee the effects on society due to new technologies in 20, 50 years or more.

Let us now focus on a specific topic. The action line “C5. Building confidence and security in the use of ICTs”, in charge to ITU, addressed some concrete needs in order to make feasible the implementation of the rest of the services (e.g. Government, Business, etc.). Cyber frauds, viruses, cyber identity and spam were, in 2003 - 2005, some of the main obstacles.

Nowadays the demand for "safety & security" in all its forms has increased, especially quantitatively and qualitatively, making clear the need for new approaches to enable the entire sector to ensure better results. It is time to extend the scope from “confidence and security” to a much more general scenario including not only security in a broader sense but even safety, natural and human disasters recovery and management, and more.

Safety and security are integral part of human rights; we must provide all the efforts in order to guarantee such rights (as stated in art 3,22, 25 - The Universal Declaration of Human Rights).

We must promote the opportunity to share experiences and best practices among countries and foster research thanks to the WSIS.

On the occasion of the High Level Policy Statements on May 2015, H.E. Mr Yasuo Sakamoto, Vice-Minister for Policy Coordination, Ministry of Internal Affairs and Communications (Japan), said - on the occasion of natural disasters ICT is the lifeblood to ensure citizen’s safety.

Looking from a different perspective: we outline the role of ICTs in risks assessment and management. ICTs are playing key roles in a number of “risky” scenarios from health and children abuse to homeland security and law enforcement, crimes, trafficking (humans, drugs, weapons, artefacts, etc.) and even safety on working places and mobility.

As Mr. Sunil Bahadur Malla, Secretary, Ministry of Information and Communications in Nepal, told us on the same occasion on May 2015 - ICTs were crucial in recovering the territory during and after the recent earthquake.

Internet of things, grids, network of sensors, remote sensing as well as Near Field Communication glued by networking are some of the building blocks of safety and security apps. Of course we cannot forget the need for an international regulatory framework, in a globalised interconnected world we cannot rely on local not harmonised laws and regulations.

In conclusion we would like to stress the positive effects due to the WSIS process and its outcomes, and suggest to include and to promote a wider range of “security” topics under the WSIS umbrella endorsing a holistic approach to the “Safety, Security, Disaster Recovery and Management” sector.

(Alfredo M. Ronchi)

Keywords:

Cyber Safety & Security, Cyber-security, Cyber-safety, Disaster Recovery, Disaster Management, Big Data Analytics, Law Enforcement, Risk Assessment

Moderator

Alfredo M. Ronchi (Secretary General, EC MEDICI Framework, Italy)

Speakers

Dr. Pavan Duggal

Advocat, Supreme Court of India - Chairman International Commission on Cyber Security Law

Prof. Simone Colombo

Delegate JRC S2D2 Fondazione Politecnico di Milano – Italy

Dr. Jabu Mtsweni

Research Group Leader for Cyber Defence at the Council for Industrial and Scientific Research (CSIR) – South Africa

Prof. Sarah Fox

Associate Professor, DePaul University, US – Middlesex University, United Kingdom

Dr. Gianluca Sensidoni

Intelligence & Defense Sales Manager - R&D Security Manager - Expert System S.p.A. – Italy

Link to WSIS Action Lines

AL1) The role of governments and all stakeholders in the promotion of ICTs for development - (Safety and security are integral part of human rights - as stated in art 3,22, 25 - The Universal Declaration of Human Rights).

AL2) Information and communication infrastructure: an essential foundation for an inclusive information society - (Access to public official information, Public access to information, Public domain information)

AL4) Capacity building (education and training in the field of safety, disasters, emergencies)

AL5) Building confidence and security in the use of ICTs (extension of the line)

AL7) ICT applications: benefits in all aspects of life (Disaster recovery, E-agriculture, E-environment, E-health, Sustainable production and consumption)

AL10) Ethical dimensions the Information Society (Common good, Ethics, Human rights, Preventing abusive uses of ICTs, Values.)

AL11) International and regional cooperation (Infrastructure development projects, Regional action plan)

Link to SDGs

SDG 2, SDG3, SGD6, SDG7, SDG8, SDG9, SDG11, SDG16, SDG17

Alfredo M. Ronchi

Short Bio

Alfredo M. Ronchi is the secretary general of the EC MEDICI Framework, founder and chair of the JRC S2D2 Cluster on Safety and Security. He is appointed by ICNM as a member emeritus of Executive Board of Directors of the World Summit Award and member of the board of Global Forum and ENSA. MEDICI's delegate at WSIS since the first phase (Geneva 2003).

He is member WSA Grand Jury and president of eContentAward Italy, coordinator of several international projects, member of the Scientific Committee of Global Forum (F-USA), Sacred World Foundation (New Delhi), Fondazione Nuove Comunicazioni (Italy).

He is appointed as an expert c/o the European Commission, the Council of Europe, the Italian Association of Banks (ABI), National Research Council (CNR). Consultant: IBM (Lugano CH) 1982-83, Team Informatica s.a. (Lugano CH) 1981-83, Thorn/Sylvania/GE Lighting, 1989-94, GE Medical Systems, 1990-93, BolognaFiere 1994-1995, Austrian Ministry of Culture 1999, Ministerium für Wissenschaft, Weiterbildung, Forschung und Kultur des Landes Rheinland-Pfalz (2000-02), Norwegian Ministry of culture – Riksantikvaren, Municipality of Christiansand, Italian Association of Banks (ABI),

Author of more that 350 papers, author/contributor of books: eCulture, eGovernment, eHealth, eLearning, eCitizens. Mr. Ronchi is a professor at Politecnico di Milano (Engineering Faculty).

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Cyber-law, cyber-crime and cyber-security

Pavan Duggal

Cyberlaw as a discipline has evolved substantially ever since its early days but needs to develop proactively and by leaps and bounce.

The International Conference on Cyber-law, Cyber-crime & Cyber-security organized by Cyberlaws.Net and Pavan Duggal Associates has been contributing to the evolving jurisprudence on cyber-law, cyber-crime and cyber-security.

There is a need for the world to start addressing legal issues pertaining to cyber security and Internet jurisdiction in a holistic manner. With Cyber terror now an increasingly significant vector, cyber terrorism needs to be effectively addressed.

Given the reality of mobile web, Mobile Law needs to substantially develop to enhance the frontiers of Cyber-law jurisprudence to facilitate seamless mobile based payments, m-banking, mobile commerce and mobile paradigm as a whole.

Consequently, Cyber-law needs to acknowledge, declare and recognize the right to access the Internet as part of universal human rights.

Given my work in Cyber-law jurisprudence, I believe that Cyber-law needs to tighten its belt in terms of dealing with emerging legal, policy and regulatory challenges thrown up by newly emerging areas of technology, whether it is the Internet of Things, 3-D printing, robotics, nano-technology , drone regulation, social media, Over The Top applications, digital and virtual currencies.

Today, darknet has appeared presenting cybercrime as a service and as an economy. Legal frameworks need to be established to regulate Darknet and prevent its misuse for cyber criminal and other related purposes.

WSIS Forum 2015: Policy Statements

It is recommended that an appropriate International Convention on Cyberlaw & Cybersecurity should be drawn up.

This should not be highly complex containing highly complicated statements, instead it should consist of universally accepted principles and norms which have been accepted across the world and which can inform the respective national policies in Cyberlaw and Cybersecurity.

The said International Convention on Cyberlaw & Cybersecurity needs to be broad, generic and engulf within its own self, broad universally accepted parameters and minimum common agreed demoninator principles and building blocks impacting Cyberlaw and Cybersecurity.

The WSIS Forum 2015 workshop on Cyberlaw An Asian Perspective has unanimously recommended about the need for such an International Convention. The said workshop has recommended that ITU initiates a working group for the purposes of determining the scope of issues and focus areas to be covered in the said International Convention on Cyberlaw & Cybersecurity.

The International Convention on Cyberlaw & Cybersecurity is an impending need of the times, would indeed be path-breaking and would immensely help to clarify the evolving jurisprudence pertaining to Cyberlaw & Cybersecurity.

This is yet another wonderful golden opportunity for ITU to seize thought leadership and contribute to an evolving Cyberlaw jurisprudence.

There is a need for complete harmonization of divergent cyber legal frameworks in different countries to promote the further proliferation of Internet.

Lot of work and development in cyber legal jurisprudence has to take place in the next coming five to 10 years. This work cannot be done alone. All stakeholders need to contribute in this humungous exercise. On the occasion of the ITU WSIS Forum 2015, I encourage ITU to contribute to evolving Cyberlaw jurisprudence and take initial initiative in terms of establishing the working group on International Convention on Cybercrime and Cyber Security.

Keywords:

Cyberlaw, cybercrime and cybersecurity

Short Bio

Pavan Duggal, is the Founder & Chairman of International Commission on Cyber Security Law. Pavan Duggal who is the President of Cyberlaws.Net, has been working in the pioneering area of Cyber Law, Cyber Security Law & Mobile Law. While a practicing Advocate, Supreme Court of India, Pavan Duggal has made an immense impact with an international reputation as an Expert and Authority on Cyber Law, Cyber Security Law and E-commerce law.

Pavan Duggal has been acknowledged as one of the top 4 Cyber Lawyers around the world. WDD [World Domain Day] recognises Pavan Duggal as one of the top 10 Cyber Lawyers around the world.

His empanelment as a consultant to UNCTAD and UNESCAP on Cyber Law and Cyber Crime respectively, membership of the AFACT Legal Working Group of the UN / CEFAT, consulting as an expert with the Council Of Europe on Cyber Crime, inclusion in the Board of Experts of European Commission's Dr. E-commerce and his work as an expert authority on a Cyber Law primer for E-ASEAN Task Force and as a reviewer for Asian Development Bank speaks volumes of his worldwide acceptance as an authority. Pavan is the President of Cyberlaw Asia, Asia's pioneering organization committed to the passing of dynamic cyber laws in the Asian continent. Pavan is also a member of the WIPO Arbitration and Mediation Center Panel of Neutrals.

As an internationally renowned Cyber law and Cyber security subject expert, at the world stage during the High-Level Policy Statement delivered by him at the World Summit on Information Society (WSIS) organized by the International Telecommunications Union (ITU), UNESCO, UNCTAD & UNDP in Geneva, Switzerland from 25th May – 29th May, 2015 Pavan Duggal has recommended the need for coming up with an #International #Convention on #Cyberlaw &

#Cyber Security. As a thought leader, Pavan has suggested that India requires a new legislation, that is wholly dedicated to cyber security.

Pavan has been the Member of the Public Interest Registry's.Org Advisory Council. He is a member of ICT policy and governance working group of the UNICT taskforce. He is the legal and policy Consultant to Internet Mark 2 Project, which is examining the next level of Internet. He has been invited to be an Associated Fellow of the Centre for Asia Pacific Technology Law and Policy (CAPTEL) at Singapore. Pavan is a Member of Panel of Arbitrators of the Regional Centre for Arbitration, Kuala Lumpur and Asian Domain Names Dispute Resolution Centre at Hong Kong.

Pavan Duggal is a Panel Member Of Permanent Monitoring Panel For Information Security- World Federation Of Scientists.

He has been associated with the Ministry Of Communication and Information Technology, Government of India on Cyber Law and Electronic Governance legal issues. He is a member of Advisory Committee on e-governance in Karnataka constituted by the Government of Karnataka. Pavan is a member of Information Forensic Working Group on E-Information Systems, Security and Audit Association. Pavan is a member of Multi – Stakeholder Steering Group of the Asia Pacific Region Internet Governance Forum (APRIGF)

Pavan heads his niche law firm Pavan Duggal Associates, which has practice areas, amongst others, in Cyber Law, Business Process Outsourcing Law, Intellectual Property Rights and Information Technology Law, Information Security Law, Defence, Biotech and Corporate Law.

While he has been a member of the Nominating Committee, Membership Advisory Committee and Membership Implementation Task Force of ICANN, Pavan is also the President of Cyberlaws.Net, which is Internet's first ever-unique Cyber Law consultancy.

In addition to that, he is also the founder of the Cyber Law Association and is also the Founder- President, Cyberlaw India.

Some outstanding pioneering work in the field of BPO legal issues has resulted in his being a member of the BPO Steering Committee of ASSOCHAM. Today, he advises a number of BPO concerns on different legal issues relating to outsourcing. Pavan was the Chairman of the Cyber Law Committee of ASSOCHAM and works closely with CII and FICCI.

Pavan is a regular on the lecture circuit. He has spoken at over 1200 Conferences, Seminars and Workshops in the last seven years, and has lectured extensively in select Law Colleges. As a Writer, he has made his mark with 75 Books on various aspects of the law in the last 15 years. He has contributed a continuing weekly column on diverse aspects of the law, titled 'Brief Cases' to the Economic Times, for the last seven years.

More about Pavan Duggal : http://www.linkedin.com/in/pavanduggal.

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Integrated Capability Management for Improved Cyber Safety and Security

Jabu Mtsweni

The cyberspace transcends across various logical and physical domains including critical information infrastructure, financial systems, military systems, health systems, automotive and transport systems, education systems, and personal information and privacy. It is also apparent that various domains are converging because of increased connectedness of “everything” through the Internet of Things (IoTs), leading to even greater security problems that cannot be addressed by technology alone. For example: the electromagnetic space and cyberspace convergence presents positive developments, but at the same time involves serious repercussions with regards to physical and logically cyber Safety and security. Current solutions to cybersecurity challenges are strongly ICT or technology focused, mostly dealing with protecting information and systems rather than people’s safety and security. It has been demonstrated through various cyber incidents that cybersecurity has huge social, environment, financial, and physical impacts affecting systems, but also users’ safety and security. It has also been shown through various research studies, that technology on its own is not adequate to address the myriad cybersecurity incidents that threatens people’s safety and security in the cyberspace. As such, it is very important that novel approaches are considered when initiating cybersecurity solutions or technologies such that these solutions take into consideration the integrated capabilities that are affected by cybersecurity challenges in order to create a positive security posture for nations and individuals. In this talk, we will share a well-researched and tested ICM (integrated capability management) approach on defining, building, deploying, and sustaining cybersecurity capabilities that consider both physical and logical cyber safety and security challenges affecting technological solutions, people, and processes.

Keywords:

Cyber Safety; cyber security; cyber-terrorism; integrated management

Short Bio

Dr Jabu Mtsweni is a Research Group Leader for Cyber Defence at the Council for Industrial and Scientific Research (CSIR) and research fellow at the University of South Africa. He is also a member of the ITU-study group on cybersecurity in South Africa. His research interests and technical expertise are in secure software development, software and firmware reverse engineering, malware analysis, threat intelligence, web security and general cyber warfare. He has over 14 years academic and industry experience and has published over 50 peer-reviewed conferences and journal papers/articles both in local and international forums. Jabu Mtsweni has also publicly presented and actively contributed at various local and international technology forums over the years, such as at ITWeb Security Summit, TEDx, SADC Cybersecurity Conference, ISSA, and recently NextGeneration Threats Conference where he shared the stage with Mikko Hypponen and Keren Elazari. Dr Mtsweni is also a co-organizer of Random Hacks of Kindness (Pretoria) and a member of Suganang Foundation, focusing of human capital development in the ICT space. Over the years, Dr Mtsweni has received a number of research and excellent awards for his work, leadership, and community engagement.

HACKED OFF – by the drive for autonomy…….

Sarah Jane Fox

The UN Sustainable Development Goals relates to a 'social contract' between the people of the world. The concept is ultimately one of 'unity' and is a vision that all humanity should partake in. The sharing of resources, technology and information remains paramount to realising the development goals. Connectivity is an essential factor in this aspirational pursuit for equality, by *ending poverty, protecting the planet and ensuring prosperity for all*. Hence, transport also remains a key factor in this equation and our connected and sustainable future.

And yet, on the other-hand, the world is seeing a paradigm shift of autonomous approaches.

This presentation, '*Hacked Off - by the drive for autonomy*' reviews the concept and paradox of 'autonomy,' from both an individual and government perspective. The focus is therefore on the conflict of policies and ideas (including with the SDGs) and the vulnerability, risk and exposure of such sovereign and independent approaches. Factors considered ultimately relate to the safety and security risks of not communicating and sharing data and information; and, not jointly acting in unison in relation to new technology developments (such as autonomous vehicles) and the need for coordinated supporting frameworks and governance systems.

Arguably, '*divisionism*' is not only divisive – it could be *damn right dangerous!* (Not only to realising the above but also to peace, safety and security).

Keywords: Cyber-risk; autonomy; coordination; policy/legislation

Short Bio

Sarah was awarded a Fulbright-Lloyd's of London, Law Research Scholarship in 2015/16, and took up a post as a visiting Professor at DePaul University, Chicago. Her research focuses on EU and International law, strategy, international relations and policy conflicts. Sarah specialises in the field of transport law/policy and adjacent measures such as policing, security, safety, infrastructure, organisations/governance. Sarah holds a Ph.D. and Masters degree in EU law (with comparison law analysis – regional and international). Sarah is also a Fellow (law) of the University of Liverpool and supports the Law (PG) Programmes at the University of Liverpool, UK, whilst also undertaking a role in risk management for the IRM.

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Artificial Logic for Integrated Risk Engineering and Management

Simone Colombo

Making decisions in complex systems it is a complicated task to accomplish. As complexity and uncertainty increase, the use of scenarios to exploring that uncertainty becomes essential to support decision makers. The difficulty associated with the combinatorial need imposed by complex systems requires methods and tools to unburden analysts from the cumbersome task of manually deriving scenarios and the awkward one of properly managing them. Leveraging on Artificial Logic (or, more formally, the Logic-based Artificial Intelligence), allows for analysts both to build complete partitions (i.e., complete sets of mutually exclusive choices) and to nimbly managing scenarios. Analysts can then analyse complex systems/phenomena by identifying the elective random variables and defining the logical and stochastic correlations amongst them (leaving to the algorithm the burden to create the complete partition),

Specifically, the Artificial Logic Bayesian Algorithm (ALBA) allows to analyse systems/phenomena of unthinkable complexity with today's methods and tools. The algorithm can be flexibly applied to analyse socio-technical systems of any kind (critical infrastructures, health care, aviation, aerospace, chemical, petrochemical, pharmaceutical…) and to identifying risks of whatever kind (e.g., risk associated with the country transition from one energy system to another, the re-design of the organisational set-up of a large company, the design of emergency management systems, the definition of borders' crossing points, the design of defensive measures for terrorist attacks, the optimisation of surgical operations, the supply chain of complex productive systems…); beyond that, ALBA can even be applied to envisage geopolitical scenarios at any level of abstraction.

Keywords: risk assessment, artificial logic, integrated risk engineering

Short Bio

Simone Colombo is Assistant Professor (tenured) of “Enterpise Risk Management (ERM)” at the Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering “G. Natta”. He has been past lecturer on "Chemical Plants", and assistant professor (tenured) of “Risk-based Decision Making in Complex System”.

He conceived, created and managed the largest European project on Industrial Safety, named VIRTHUALIS (acronym of Virtual Reality and Human Factors Applications for Improving Safety). The project, with a budget of 15M€ and a duration of 5 years (2005-2010), gathered 49 partners (companies and research institutions) from 17 European countries (amongst which TOTAL, BP, STATOIL and SONATRACH). The VIRTHUALIS project ended up with the first prototype of what is now named Plant Simulator.

He has been executive board member of the European Technology Platform on Industrial Safety (2003-2007), leading, jointly with Electricité De France (EDF), the Human and Organizational Factors workgroup. He has been chairman of the Technical Committee on Human Factors in Safety and Reliability (2006-2010) for the European Safety and Reliability Association (ESRA). He has also been executive board member of the Italian Association of Chemical Engineering (2006-2008).

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