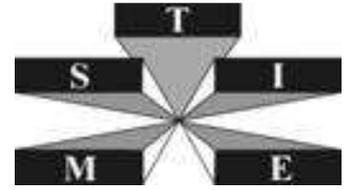


# THE INTERNATIONAL EMERGENCY MANAGEMENT SOCIETY

Members Newsletter - ISSUE 18 –July 2013  
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*TIEMS 2013 Annual Conference: Velaux, France, 1-4 October 2013*



French Fire Service New Training Centre in Velaux

## MESSAGE FROM THE PRESIDENT

*K. Harald Drager, TIEMS President*

TIEMS continues its international development, and is spreading out its activity more and more worldwide, with members and chapters. New members and chapters add valuable expertise and cultural diversity to the TIEMS international network, which comprises of users, planners, researchers, industry, managers, response personnel, practitioners, social scientists, and other interested parties within emergency and disaster management.

This network constitutes a large international multidisciplinary group of experts, with different educational backgrounds and various experiences in the field of emergency and disaster management, representing a unique source of expertise and ideas, which are important assets in creating resilient societies.

In order to exploit this knowledge to the benefit of creating a safer world, in line with the TIEMS mission statement, TIEMS has initiated an international education program in emergency and disaster management and established a research service for its members within this field.

Education and research are closely related, and are instrumental in reducing the risks associated with disaster on an international level; as expressed in the TIEMS slogan:

**“Preparedness Saves Lives”**

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## In this issue

- TIEMS Italian Chapter
- TIEMS Japan Charter
- TIEMS Board of Director Profile spotlight
- TIEMS 2013 Annual Conference
- TIEMS Japan Conferences
- Finnish Workshop
- TIEMS Berlin Conference
- TIEMS Bylaws updated
- Newest TIEMS Instructor: Kuniyuki Tashiro
- Harvard training course on Radiological Emergency Planning
- Tips, Trips, Traps and Pitfalls of Performing a Business Impact Analysis (BIA)
- International Forum on Urban Food Control
- 2013 LESS AS
- Black Swans or Wishful Thinking and Misinterpretation
- Is risk really indefinable?
- Call for Papers
- Call for Applications - DRLA

The TIEMS international education program is motivated by:

1. Putting international focus on the profession of Emergency and Disaster Management
2. Contributing to an international standard of education, training and certification in Emergency and Disaster Management
3. Contribute to the education in Emergency and Disaster Management by promoting state of the art technology, systems and available methodologies
4. Contributing to education at all levels, from policy documents to course curriculums in primary school education
5. Establishing the TIEMS 'Certification of Qualifications' in International Emergency and Disaster Management - TIEMS QIEM Certification
6. Contributing to capacity building in countries where little or no education and training exists
7. Recruiting international teachers and trainers to the TIEMS Pool of International Teachers and Trainers

The Research and Technical Development (RTD) service has the following objectives:

8. Propose RTD projects which can improve methods, systems, operations and technology in emergency and disaster management
9. Initiate RTD Consortiums where TIEMS members can participate in RTD proposals
10. Inform members of established RTD Consortiums and RTD activities, where TIEMS members can participate

Both of these TIEMS activities are continuously developing and showing great progress, and provide value in international disaster preparedness. However, the TIEMS is also complimentary network to other international disaster risk reduction networks, research institutions and universities working towards similar goals. TIEMS invites all groups to participate and cooperate in our initiatives.

*“We can achieve more working together than working alone”*

Cooperation may start with taking small steps and TIEMS is launching two concrete cooperation initiatives this fall. Both are the result of Ecole des Mines student, Thomas Acheritogaray during an internship engagement with TIEMS from May to August this year:

1. Presenting an overview of internationally available funding for RTD activity in emergency and disaster management
2. Presenting an overview and brief description of Civil Protection and DDR organizations worldwide

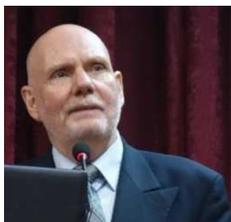
Thomas has started this work and a basic report on both is available and we invite the international emergency management community to support and join us in sharing collected data and completing the initiatives. This information is intended to be searchable and readily available on the TIEMS web-site, and be further enhanced with information from participating partners. It is intended to work like a “TIEMS Wikipedia” site.

The motivation behind these two initiatives is twofold:

Many good ideas for improving disaster preparedness are never developed because of lack of funding. Therefore, knowing alternative international funding resources may allow for more ideas to be funded, and consortiums can be established which have the composition and strength to develop the good ideas into fruitful results.

Lessons learned and learning from each other is the key to greater resiliency. Therefore, knowing how other organizations address their disaster risk reduction challenges and get easy access to this information will help those who are in the start up phase of disaster planning or lack competencies and experience in disaster risk reduction.

I hope these TIEMS initiatives can contribute to spreading greater knowledge about disaster risk reduction good practices to allow good ideas to be funded and realized.



*K. Harald Drager – TIEMS President*

## **The International Emergency Management Society ITALIAN CHAPTER of TIEMS**

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TIEMS Italy Chapter was approved by TIEMS Board of Directors 14.07.2013



### **TIEMS Italy Chapter Location and Funding Members**

The geographic location of the Chapter is Italy and the names of the eight founding members of TIEMS Italy Chapter are:

1. Sandro BOLOGNA
2. Marco BULDRINI
3. Carmelo DIMAURO
4. Alessandro LAZARI
5. Cristina LEONE
6. Vittorio ROSATO
7. Lucio TIRONE
8. Paolo TRUCCO

### **TIEMS Italy Chapter Main Objective**

The Italy Chapter will develop the TIEMS network, aims and social targets, in its geographical territory, by attracting more members as soon as it starts its activities. An organisational target is set to at least 10 members: individuals and companies/institutions, after one year of the start of the Italy Chapter.

## **Activities of TIEMS Italy Chapter**

TIEMS Italy Chapter will accomplish its objectives by the following activities:

- a. Elaborate environmental studies and assessment reports to examine the possibilities for rehabilitation and/or to secure the environmental integrity in the regions of Italian affected by the emergency situations;
- b. Co-operation with universities, research institutes, information offices, technical publishers, professional organizations, as well as governmental and non- governmental organisations and businesses;
- c. Coordinating and/or implementing relevant research and development projects of regional/national/local interest;
- d. Providing expertise for research, analysis, monitoring and evaluation as well as other similar activities in the environmental protection area;
- e. Organizing lectures, courses, workshops, symposiums and conferences; Italian Chapter may hold meetings as they seem appropriate but such meetings should be coordinated with the TIEMS Board;
- f. Conducting/facilitating interdisciplinary research/development projects;
- g. Fundraising for, and allocation of, scholarships for young specialists;
- h. Organizing professional study visits in-country and abroad;
- i. Raise financial support for required professional activities;
- j. Printing magazines and books on relevant and/or supportive topics;
- k. Affiliation to required international associations;
- l. Internet connection and WEB pages creation for the TIEMS Italy Chapter;
- m. Chapters may hold Chapter meetings as they seem appropriate but such meetings should be coordinated with the TIEMS Board.

## **Organization and leadership of TIEMS Italy Chapter**

TIEMS Italy Chapter will be managed by a President, a Secretary and a Treasurer, elected from the members for (alternated periods) 3 years. Therefore there will be an election of for a 3 year mandate.

For now appointed for the period between the year 2013 and 2015 (from 1<sup>st</sup> January 2013 until 31 December 2015):

President: Carmelo DIMAURO

Secretary: Alessandro LAZARI

Treasurer: Marco BULDRINI

# Overview of TIEMS Japan Chapter Activities

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## 1. Establishment of TIEMS Japan Chapter

TIEMS Japan Chapter was established in May 2012. There are already over five hundred members, and the chief of the chapter is Prof. Haruo Hayashi from Disaster Prevention Research Institute Kyoto University. In 22<sup>th</sup> and 23<sup>rd</sup> May 2012, commemorative symposium was held for the establishment and three mission of the Japan Chapter were set up to:

1. Create a place for exchanges of the information between the researchers and the professionals in connection with risk management.
2. Promote practice of the risk management in an international framework.
3. Spread and focus on research and development of the risk management / disaster prevention and promote standardization.

## 2. Our Membership

Most of our members are experts Managers, Response Personnel, Practitioners, Consultants, and other Interested Parties within Emergency and Disaster Management. Firemen, administration officials and university professors are included as well. We send e-mail newsletters to over five hundred members regularly.

## 3. Public Conference

TIEMS Japan Chapter holds a public conference three times a year to achieve its mission.

The 1<sup>st</sup> conference was held on 17<sup>th</sup> Oct 2012; the theme being “Emergency Response” and there were 150 people in attendance. Prof. Hayashi reported “Incident command system in the US”, Mr. Kumamaru (Vice Director of Fire force in United States Army Camp Zama) reported “Practice of the ICS”. Person in charge of Emergency Management from Nissan and Hitachi were also reported about their emergency response plans.

The 2<sup>nd</sup> conference was held on 25<sup>th</sup> Jan 2013; the theme was “Design of Emergency Operating Centre (EOC)” and once again, 150 people were in attendance. Associate Prof. Maki (Chief secretariat of TIEMS Japan Chapter / Assistant Professor of Disaster Prevention Research Institute Kyoto University) reported “Design of EOC and information at the time of disaster”. A local government representative, Panasonic and a Gas Company also reported on EOC and their own disaster response experiences.

TIEMS Japan is planning to hold additional conferences focused on operational information, command & control and cooperation & coordination based on ISO22320 over the next year.

#### **4. 2014 Annual Conference in Niigata**

The TIEMS annual conference of 2014 will take place in Niigata, Japan. It'll be held at the Niigata Convention Center in October. The time of the conference will be commemorative, as it will be tenth year from the "Chuetsu Earthquake", one of the biggest earthquakes ever to hit Japan.

Over 19,000 lives were lost in the Great East Japan Earthquake and Tsunami of 2011, which reaffirmed the significance of Emergency Response and Recovery and have developed the ability to learn constructive lessons of the usage of GIS from Chuetsu Earthquake.

The Japanese Government has been continuously researching Emergency Response as a national project after the Great Hanshin Earthquake and the Chuetsu Earthquake was the first large-scale disaster since then.

TIEMS Japan will report and discuss about the front line research project at the 2014 TIEMS annual conference. All at TIEMS Japan look forward to meeting many new friends and hope you can attend. TIEMS Japan Chapter is on Facebook. Go to <http://www.facebook.com/TiemsJapanChapter>.

### **TIEMS Board of Directors Profile Spotlight:**

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Yukio Fujinawa (Japan)



*Yukio Fujinawa is TIEMS Regional Director for Asia.*

Yukio Fujinawa started his work in the disaster mitigation from 1965 as Researcher, National Research Centre for Disaster Prevention (NRCDP). He received a Doctor of Science degree in 1976 from Department of Physics, Faculty of Science, University of Tokyo focusing on generation and two directional spectrum of the wind wave based on observations at one of the largest oceanographical towers in the world. As the chief of the First Research Laboratory of Coastal Disaster Prevention, he investigated tsunami deformation and amplification in the shallow part of sea by means of multi-point measurements of ocean long wave and surf beats in the Sagami-Bay.

In 1975 he joined the team for the earthquake disaster mitigation as Chief Researcher of Crustal Deformation Research Laboratory. He engaged in the prediction research of the great earthquake through seismic observation using pop-up type ocean bottom seismometers. In 1987 he became Visiting Researcher to make collaborative researches. Main interest was the investigation of earthquake precursor through electromagnetic approach using underground antenna, geodetic approach using GPS, and seismic approach using cable-type ocean bottom seismic and tsunami observational network. In 1990 as a director of the Special researcher he engaged in the Magnetotelluric survey of crustal conductivity, synthetic aperture radar image for detecting ground surface deformation related with earthquake, volcanic eruption and climate changes.

In 2000 he started the R/D for the earthquake early warning system. After leaving NRCDP in 2003 he participated in the national EEW project to developed systems for disaster mitigation using EEW as CEO of the (NPO) Real-time Earthquake Information Consortium (REIC). Currently he is a chief researcher in Genesis Inc. in the work of development of the high accurate disaster mitigation system for EEW, Tsunami Early Warning (TEW) and earthquake prediction. And he is chairman of Risk Control Association and senior adviser of the TIEMS Japan Chapter to promote the technology transfer of EEW and TEW systems as well as international standardization of EEW. He received the Prize of The Director of Science and Technology Agency in 1981, and the Prize of The Distinguished Work in Science and Technology in 1997. He has served as referee for various scientific journals. Professional publications: 65 Refereed Journals, 80 Institutional Papers, 20 Proceedings, 10 Popular Science and numerous appearances in national news-networks.

TIEMS Advisory Board Member, **A. Alex Fullick**, asked Yukio a few questions to get to know him a little better and this is what he had to say.

**1) *What made you become interested in the Emergency Management / Disaster Management field?***

I have been working for National Institute for Disaster Mitigation for more than 35 years, so my work has been deeply involved in the Disaster Management field. I was engaged in Research & Development building observation systems and developing prediction methods for Disaster Mitigation. This means I had limited opportunities for further education and training. I dedicated myself to the National Project for Earthquake Early Warning for some ten years, beginning in 2001. My main focus was as a Project Manager, researching and developing an application system that could be utilized by all levels of users. During these activities, I realized the importance of having a management scheme that would help aid efforts to disseminate information to earthquake prone-areas (globally). I discovered TIEMS after several work experiences and meeting the organizations president, K. Harald Drager who very willing to work in cooperation with what we are doing in Japan.

**2) *How did you become involved with The International Emergency Managers Society (TIEMS)?***

I had the chance to be invited to speak on Earthquake Early Warning during a preliminary meeting with the TIEMS Korea Chapter (Seoul). However, that opportunity did not seem enough and I wanted to understand more of what the TIEMS organization was all about. The second chance was at the preliminary meeting in Shanghai, China. At this conference I was very impressed by the presentation by TIEMS President, K. Harald Drager; now I understood the ultimate goal of TIEMS. I promised him that I would start proceedings for a TIEMS Japan Chapter. I feel that TIEMS can provide chances to connect academic community members with hands-on officials to make Emergent Management more effective to make the world safer. In the meantime, I was very fortunate for me Prof. Hayashi, Director General of the Japan Chapter, who agreed to help build the Chapter and become the Chapter leader.

**3) *How do you see your research efforts benefiting and assisting people, organizations, communities and governments regarding Emergency Management / Disaster Management planning and response?***

I believe that every researcher wants their work to contribute to disaster mitigation and as influential as possible. It is not easy to confirm one's impact because the efforts are usually too big to see individual contributions and a long time is needed before the efforts are reflected in products and practices. I managed more than ten R&D projects without confirming clear benefit to the Emergency Management / Disaster Management realm. One exception is the Earthquake Early Warning System (EEW), which was proposed by myself in the final stage of my career at the national institute. The system became of practical use in whole of Japan beginning 2007. It contributed to life safety on a large scale. The effectiveness was confirmed as being heavily utilized during the Tohoku earthquake, with more than 80% of people answering positively to a questionnaire sent regarding the usefulness of the system. Moreover, many radio listeners and TV watchers voiced their approval of the EEW system - including television media itself being grateful for the system. I have felt a great reward for the last 10years, knowing that I worked on a system that saved many lives. The earthquake prediction research has been my key interests and I have spent a majority of my time working on this in several different disciplines, such as; development of ocean bottom seismometer, building of extensive ocean bottom seismometer and tsunamis networks, crustal monitoring network by GPS, and electric variation measurement for the investigation of earthquake precursors. We have lots of work remaining, as current prediction methods aren't fool proof but with constant work, we can make systems and processes stronger for future generations.

**4) *What do you see as being the greatest challenge in Emergency Management & Disaster Management?***

Emergency Management & Disaster Management consists of many components that need to be managed by governments, not just by NGOs such as TIEMS. We should focus on our strengths to help build strategies that become stronger and indispensable. I think the strategic management should have a balance between strategy and content. Both of them should be balanced to reflect the status of a community and should be adaptable to new R&D results. As for content, I can't stress enough the importance of utilizing information for disaster mitigation, preparedness and Emergent Management. TIEMS has the goal to bring the practitioners and the academic community together to help established organizations. The most important policy of TIEMS is very simple; to make people - of any country - recognize the significance of Emergency Management & Disaster Management, using the resources that TIEMS has at its disposal.

TIEMS needs to become even more proactive to attain this goal, based accumulating member experience and increasing skills. To address this, TIEMS is putting together two new task forces: the TIEMS Earthquake Expert Task Force and the TIEMS Emergency Medicine Expert Task Force. There will be very profitable in making TIEMS stronger, both in skill and experiences. I am willing to take part in the TIEMS Earthquake Expert Task Force to promote the EEW to help disseminate information to countries around the world and increase earthquake the prediction.

**5) *What accomplishment are you most proud of?***

During my entire R&D carrier, I participated in ten key items for Disaster Mitigation, the one I am most proud of is the so-called EEW, which I've already talked about. The system has been used in Japan since 2007. It's been reported that the system has been used by more than 80 % of people during major earthquakes, including the great Tohoku earthquake. As to the prediction of earthquakes, I invented a

unique monitoring system based on the observation data at 3.11. I think this is really a large accomplishment in the history of earthquake prediction though it will probably take another decade until the findings are approved.

**6) Tell us something personal about you. What do you like to do in your spare time?**

Being over 70, I decided to concentrate on communicating my experiences to the next generation of planners and practitioners. I am fond of reading classical books such as the Bible, Japanese and Chinese classical books and historical novels. Every weekend I walk in and around Tokyo visiting various parks and gardens, as well as small historical sites and monuments.

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## **TIEMS Japan Chapter Conferences 2013 – 2014**

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TIEMS Japan Chapter will arrange the following conferences in 2013 - 2014:

1. Sep. 26, 2013 on "*Cooperation and Coordination*"
2. January 24, 2014 on "*Command and Control*"

Both conferences are in Japanese and open to the public. For questions or more information, please, contact Norio Maki at: [maki@drs.dpri.kyoto-u.ac.jp](mailto:maki@drs.dpri.kyoto-u.ac.jp).

*TIEMS Japan Chapter will also be arranging the 2014 TIEMS Annual Conference Niigata, Japan.  
More information coming soon!*

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## **TIEMS Finland Chapter Workshop**

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TIEMS Finland Chapter Workshop on Smart Environments and ICT System Living Lab for Societal Security.  
September 26- 27, 2013. Finland.

Workshop venue: Laurea University of Applied Science: [www.laurea.fi/en](http://www.laurea.fi/en) The workshop participation is free of charge.

The first day of the workshop will host a key notes speakers session and a round table discussion. The session language is Finnish. Participation in the session is by invitation.

The second day of the workshop will host a multidisciplinary research seminar, Implementation, Living Labs and Business Applications sessions, Nordic project proposal consortia meeting. The session language is English.

For questions or more information, please, contact Dr. Lari Halme at [lauri.halme@nic.fi](mailto:lauri.halme@nic.fi)



	<p><i>Coffee and Posters</i></p> <p>Panel debate and Discussion</p> <p><i>Lunch and Posters</i></p> <p>Posters Presentations</p> <p>Future Expectations</p> <p><i>Coffee and Posters</i></p> <p>Summing Up</p> <p><b><i>End of Conference</i></b></p>
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### SUBMISSIONS From 22 COUNTRIES

#	AUTHORS	TITLE	COUNTRY
1	Kåre Harald Drager	Disaster Risk Reduction - TIEMS International Efforts towards Resilient Communities	Norway
2	Morten Gustavsen	How can Social Media be a Reliable Added Value together with other Warning Channels	Norway
3	Matthew Billingsley	Towards an Evidence-based Approach to Crisis Communication	UK
4	Timothy Tinker	Crowd sourcing, Alerts, and Other Innovative Social Media Strategies for Communicating during Crisis and Disasters	USA
5	Michael Klafft	Modelling Alert Message Dissemination via Multi-Channel Electronic Communication Systems	Germany
6	Eli Rohn <sup>1)</sup> and Connie White <sup>2)</sup>	Social Media Usage in Man-Made Crisis: Offensive Information Warfare Revisited	<sup>1)</sup> Israel and <sup>2)</sup> USA
7	Samantha Ridler	An 'App' for everything; But do Apps for Disaster add value?	Japan
8	Gideon Mukwai	Global Public Sphere 2.0: Lessons You Must Learn to Survive and Thrive	Singapore
9	Sigmund Kluckner, Willi Wendt and Wolf Engelbach	Agent Based Simulation of Warning Channel Impacts	Germany
10	Concetta	Alert Models	Italy

	Marletta and Bruno Manfrè		
11	Matthias Müllner	Siren Warning Systems: Key Elements of Public Warning	Germany
12	Hermann Huber, Georg Neubauer, Andrea Nowak, Joachim Klerx, Bettina Jager, Klaus Mak and Christian Meurers	Social Media Information Analysis for Crisis and Disaster Management	Austria
13	Cristina Párraga <sup>1)</sup> , Joseph Muna <sup>2)</sup> , Sébastien Grazzini <sup>3)</sup> and Ralf Pfeffer <sup>1)</sup>	A Complete Communication Framework for Public Alert: the Alert4All Approach	<sup>1)</sup> Germany, <sup>2)</sup> UK and <sup>3)</sup> France
14	Giuseppe Patti	Personalized Alarm Techniques in Monitoring Flash Flood in Sicily	Italy
15	Marina Ghersetti	The Contribution of Social Media to Crisis Communication	Sweden
16	Alex Fullick	TELL ME NOW!! How to Leverage Social Media for Business Continuity & Disaster Planning Programs	Canada
17	Florian Roth and Stefan Brem	Opportunities and Risks of Social Media in Disaster Management - A Swiss Perspective	Switzerland
18	Kerstin Dressel and Patricia Pfeil	Public Alerting by Social Media and beyond – Advantages and Challenges of Social Media compared to more Traditional Alerting Tools	Germany
19	Joel Brynielsson <sup>1)</sup> , Fredrik Johansson <sup>1)</sup> , Carl Jonsson <sup>2)</sup> and Maribel Narganes Quijano <sup>3)</sup>	A Screening of New Media Tool for Crisis Management	<sup>1)</sup> Sweden, <sup>2)</sup> UK and <sup>3)</sup> Spain

20	Oliver S. Schmidt	Effective Use of Social Media in Crisis Management	USA
21	Luis Teixeira <sup>1)</sup> , Barbara Manso <sup>1)</sup> , Hanna-Miina Sihvonen <sup>2)</sup> , Laura Hokkanen <sup>2)</sup> and Thomas Delavallade <sup>3)</sup>	THEO – A Multi-dimensional Analytical Framework to Address the Use of New Communication/Social Media in Crisis Situations	<sup>1)</sup> Portugal , <sup>2)</sup> Finland and <sup>3)</sup> France
22	Richard Stronkman	Twitcident: Social Media Monitoring for Crowd Management, Social Weather, and Emergencies	Netherlands
23	Jose Rubiera	Tropical Storms and Hurricanes in the Caribbean: Public Alerting to Prevent Disasters	Cuba
24	Hayley Watson and Kush Wadhwa	COSMIC: The Contribution of Social Media to Emergency Management - State of the Art in Media Communication	UK
25	Sonja Krawczyk	Development of Local Level Threshold Terms for the Risk Analysis of Region Hannover	Germany
26	Vitaveska Lanfranchi <sup>1)</sup> , Fabio Ciravegna <sup>1)</sup> , Rodrigo Carvalho <sup>1)</sup> and Uta Wehn de Montalvo <sup>2)</sup>	Social Media and Sensors for Citizens Engagement and Cooperative Situation Awareness	<sup>1)</sup> UK and Netherlands <sup>2)</sup>
27	Jayesh Wadhvani and Tore Andre Nilsen	Intelligent Alerting and Response using Social Media as a Software Sensor	USA
28	Kyle Clayton, Kristin Samulkewitsch and Daniel Culkin	Communication Transformed: Social Media and Disaster Communication in the Modern Age	USA
29	Tom Duffy, David	PRISM: Platform for Real-time Integration of	USA

	Merrick and Kristin Samulkewitsch	Social Media	
30	Sajad Ganjehi and Behrouz Bavandpourigilan	Analysis of Security Parameters in the Selection of Optimal Routes for Search and Rescue	Iran
31	Serye Yum, Youngtae Son and Sanghwa Lee	A Study on Dynamic Evacuation Route Searching for Traveling Vehicles under Disaster Conditions	Korea
32	Colum Donnelly, Massimiliano Mesenasco and Paola Valentini	Social Media & Human Factor in time of Crisis: Making the Difference	Italy
33	Martin Hammitzsch <sup>1)</sup> , Fernando José Carrilho <sup>2)</sup> , Ocal Necmioglu <sup>3)</sup> , Matthias Lendholt <sup>1)</sup> , Sven Reißland <sup>1)</sup> , Jana Schulz <sup>1)</sup> , Rachid Omira <sup>2)</sup> , Mustafa Comoglu <sup>3)</sup> , Nurcan Meral Ozel <sup>3)</sup> , and Joachim Wächter <sup>1)</sup>	TRIDEC Tsunami Early Warning System in international tsunami warning and communication exercise	<sup>1)</sup> Germany, <sup>2)</sup> Portugal and <sup>3)</sup> Turkey
34	Frank Hoen	Child Alerts; Mobilizing the Masses with Zero Marketing Budget AMBER Alert Europe: a Crowd-sourcing Case Study	Netherlands
35	Marie-Valentine Florin	Social Media for Crisis Communications: Opportunities and Challenges	Switzerland
36	Seyed Abolfazl Mohammadi, Nasser Mehrdadi	Studying of Information Technology & Media in Crises Management	Iran

	and Bahreh Ghods		
37	Seyed Abolfazl Mohammadi, Arina Es'Haghi and Naser Mehrdadi	The Role of Media in Various Stages of Flood Crises Management	Iran
38	Carol Allers and Jose Correira	Communication Preparedness for Planned/Emergency Load Shedding	South Africa

### Registration Fees

REGULAR	TIEMS MEMBER	STUDENT	STUDENT MEMBER
275 €	200 €	150 €	125 €

## TIEMS 2013 Annual Conference Velaux, France

1 - 4 October, 2013



TIEMS Annual Conference 2013 will take place in Velaux, France at the French Fire Brigade new Training Academy!

*(North of and close to Marseille)*

The main topic is *"Robotics in Emergency and Disaster Management"*

There will be presentations and exhibitors from 18 countries!

#	AUTHORS	TITLE	COUNTRY
<b>Robotic Subjects</b>			
1	Vincent HONORE, Stéphane MOZZICONACCI, Michel-Ange DOMINGO, and Jean-Paul MONET	Robots Cooperation Managing Radioactive Source Recovery	France
2	E. Rodriguez, S. Mozziconacci, L. Verneuil and J.P. Monet	Needs and Constraints for Civil protection Robotic Solutions	France
3	S. Mozziconacci, L. Verneuil, J.M. Denis and J.P. Monet	Robotic Solution for Civil Protection, Overview on a Six Year Development Project	France
4	Stephane Normand, Karim Boudergui, Frédérick Carrel, Romain Coulon, Vladimir Kondrasovs, Jean-Michel Bourbotte, Romuald Woo, Guillaume Sannié and Gwenolé Corre	About Embedded Sensors on Robotic Platforms, Technical Features	France
5	Filippo Arrichiello, Federica Pascucci, R Setola	Indoor Localization and Connectivity Maintenance in Rescue	Italy
6	C. Fargeon	Advanced Artificial Intelligence Dedicated to UGVs Development	France
7	Dirk Schultz	About CBRNE Land Robotic Research and Development Projects	Germany
8	Pr. Nacer Kouider M'Sirdi	Driving Simulator of All-Terrain Vehicles using SCANer-Studio	France
9	Samantha Ueno	UAV's for Hazard Monitoring and Disaster Recovery Earth Observation Data	UK/Japan
10	Gilles FOURNIER	AIRBEAM : AIRborne Information for Emergency Situation Awareness and Monitoring	France
11	Philippe Chrobocinski <sup>1</sup> and Effie Makri <sup>2</sup>	The Use of UGVs in Earthquake Response Operations	<sup>1</sup> )France/ <sup>2</sup> )UK
12	Thomas Eriksson, Bo Björklund, Dan Hallman, Kristina Lindfeldt, Stefan Särdaqvist and Per-Erik Johansson	FUMO™ - the Fire-fighting Robot	Sweden
13	Charles Kelly	Robotics and Humanitarian Interventions: Challenges of Challenging Environments	USA
14	Roland Lenain, Mathieu Richier, Jean-Baptiste Braconnier, Cariou Christophe and Benoit Thuilot	High Speed and Safe Mobile Robot Control in Unstructured Environments	France
15	Konstantin P. Darmaniyan and Darko Dužanec	Multifunctional Robotic System for CBRNE Application	Croatia
16	Håkon BJORHEIM Abrahamsen and Stephen JM Sollid	Rotor-wing Unmanned Aerial Vehicle in Pre-hospital Critical Care – a Feasibility Study	Norway
17	Michael Barry Edis	iRobot at Fukushima Accident	USA

## General Emergency and Disaster Management Subjects

18	Kåre Harald Drager	Disaster Risk Reduction - TIEMS International Efforts towards Resilient Communities	Norway
19	Audrey Heffron Casserleigh and Jarrett Broder	Using Psychosocial Attributes in Terrorist Profiling to Identifying Potential Security Threats	USA
20	Yasutake Sayanagi	Study with the In-Datacenter Backup Office for Banks	Japan
21	Nina Frolova), Jean Bonnin, Valery Larionov, and Aleksander Ugarov	Uncertainties Of Earthquake Loss Estimation At Global Scale In Emergency Mode	Russia
22	Yukio Fujinawa	Utilization Scheme and Performances of the Earthquake Early Warning in Japan	Japan
23	Gilles Henschger	A TOTAL APPROACH TO CRISIS : About an Industrial Common ICT Tool for Crisis Management	France
24	Woojung Choi, Jaewoong Cho, Jinyoung Kim and Woonkwang Yeo	Trial and Effectiveness of Natural Disaster Investigation System using Smart Phone in Korea	Korea
25	Neil Dufty	Recent Research in Community Disaster Education and its Implications for Emergency Management	Australia
26	Takahiro Ono	Business Continuity Planning Status of the Private Sector and DRR Capacity of the Public Sector in the Asia Pacific Region	Japan
27	Susan Madison Smith and Kenyon L. Maddon	Training & Preparedness: Preparing Healthcare Facilities to Effectively Respond to a Disaster	USA
28	Jaroslav Pejcoch	The Vulnerability and Resiliency in our Globalized and Virtualized World	Czech Republic
29	Kenji Watanabe	Conceptual Design of Supply Chain Management Coding Scheme for Foods and Beverages in large-area Disasters based on PPP (Public-Private Partnership)	Japan
30	Jinyoung Kim, Jaewoong Cho, Woojung Choi and Jongkook Lee	Debris Flow Monitoring during Typhoon Sanba using Integrated PCB Sensor	Korea
31	Snjezana Knezic	Development of a Sustainable Flood Disaster Management Plan for Trans-boundary River Basins	Croatia
32	Mann Fang	Comparative Study on Beijing Residents' Risk Perception on Incidents of Pandemic Influenza, Subway Terrorist Scenario and Torrential Rain	China
33	Guosheng Qu	Capacity Building for National-wide Search and Rescue Team and Preparedness of Earthquake Catastrophe	China
34	Susan Madison Smith	Preventing or Responding to Violent Attacks in Schools: Education, Training and Facility Improvement Strategies	USA
35	Dan Manastireanu and Stela Petrescu	MEDICAL MANAGEMENT IN DISASTERS	Romania

36	Meen Chhetri	Significance of Cooperation and Coordination in International Disaster Management System	Nepal
37	Ji (Jack) Zhang	IOT Technology and its Application in the Crisis Pre-alert Management	China
38	Ranko Britvic and Ana Mikacic	IF REACT – Innovative First Responder Ensembles Against CBRN Terrorism	Croatia
39	Norio Maki	How Resilient is Japan? - Response and Recovery Lessons from the 1995 Kobe and 2011 Tohoku Disasters	Japan
40	Haiying Wang, Guosheng Qu, Gang Sun and Chun Ouyang	Phases of Earthquake Emergency Response Period	China
41	C. Di Mauro, S. Bologna, M. Buldrini, A. Lazari, C. Leone, V. Rosato, L. Tirone and P. Trucco	TIEMS Italian Chapter – National Emergency Management Experience and Future Challenges	Italy
42	Mi-yun Park, Mi-na Kim, Jong-bok Park and Yee-sub Oh	The Development of Safety Standard in Law System using the Accident Cause-result Relational Approach Method	Korea
43	Young-Jai Lee	Developing a Platform for Disaster Risk Reduction Technology Dealings	Korea
44	Frank Hoen	Child Alerts; Mobilizing the Masses with Zero Marketing Budget AMBER Alert Europe: a Crowd-sourcing Case Study	Netherlands
45	Mohamed SEDIRI, Nada MATTA, Sophie LORIETTE and Alain HUGEROT	Decision Support Through the Experience Feedback of Crisis Management	France

To register, go to: <http://tiems.info/TIEMS-Events-2009/annual-conference-2013.html>

Students can apply for TIEMS Rohrmann Student Scholarship Fund, which supports two students this year for participating in the conference!

### Registration Fees

<i>Pre conference Tour 1<sup>st</sup> October</i>	100 Euro	
<i>Preconference Tour 2<sup>nd</sup> October</i>	100 Euro	

<i>Conference 3 – 4 October For Participants with Accepted Papers</i>	Regular	Transition Economy	Students
TIEMS Members	225 €	225 €	180 €
Not TIEMS Members	300 €	250 €	200 €
<i>Conference 3 – 4 October For participants without Presentation</i>	Regular	Transition Economy	Students
TIEMS Members	325 €	325 €	280 €
Not TIEMS Members	400 €	350 €	300 €
<i>Exhibition Space incl. Furniture</i>	Contact: <a href="mailto:alice.letessier@pole-risques.com">alice.letessier@pole-risques.com</a>		

For questions or more information, please, contact: [jpmonet@sdis13.fr](mailto:jpmonet@sdis13.fr)

### Preliminary Program

#### **Tuesday October 1, 2013**

##### **Pre-seminar, visits**

In the morning, visit of Bouches-du-Rhone Fire Department HQ in Marseilles dedicated to forest fires, floods and EMS crisis management. In addition, presentation of advanced technologies and UGV UAV use.

##### **Lunch**

In the afternoon, visit to the regional (Southern France) civil protection HQ in Aix en Provence dedicated to forest fires, floods and EMS crisis management. In addition, presentation of the national water bombers aircraft management.

#### **Wednesday, 2, October 2013**

##### **Pre-seminar, demos**

In the morning, visit and demo of the Hazmat team of Bouches-du-Rhone Fire Department (BDRFD), including UGV use.

##### **Lunch**

In the afternoon, visit to the BDRFD School with demonstration of simulation tools during a training session, involving 12 trainees in the same virtual environment.

##### **Evening Social Event**

### **Thursday October 3, 2013**

#### **Conference presentation day**

The Conference will take place at the Fire School pedagogic building. It will be an opening session with authoritative speakers and keynote presentations.

Showroom for specialized tools

TIEMS Annual General Meeting

Presentation of submitted and approved papers

#### **Lunch**

Presentations of submitted and approved papers followed by a discussion, and Q&A session.

#### **TIEMS Gala Diner**

### **Friday, October 4, 2013**

#### **Conference demo day**

The event will take place at the Fire School training facilities with demo of the different UGVs.

Showroom for specialized tools

Presentation of submitted and approved papers

#### **Lunch**

Wrap up and closing of the conference with TIEMS Week 2013 Declaration.

## **TIEMS By-Laws (Revised)**

The TIEMS present By-laws were approved by TIEMS Extraordinary General Meeting on 18th February 2013, and became effective 14th June 2013 after publishing in "Moniteur Belge." The by-laws are in both French and English.

The by-law revisions have been in the works since 2010, using a very thorough process that ultimately made them simpler and adaptable to the future development of the overall TIEMS organization.

You can find the new by-laws at: <http://tiems.info/About-TIEMS/tiems-by-laws.html>



# TIEMS Welcomes KuniyukiTashiro as Our Newest TIEMS Instructor!!

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Name: *KuniyukiTashiro MBCI*  
Position: *Senior Consultant*  
Organization: *InterRisk Research Institute & Consulting, Inc., Japan*  
Nationality: *Japanese*  
E-mail: [ktashiro.src@gmail.com](mailto:ktashiro.src@gmail.com)



## **Biography:**

KuniyukiTashiro MBCI, Tokyo, Japan, is a senior consultant in InterRisk Research Institute & Consulting, Inc. (<http://www.irric.co.jp/>) He has 8 years of experience for consulting of business continuity management and risk management in Japan. Kuniyuki provides consulting service for various industries including manufacturing, IT service, hotels, financial service, and insurance industry.

He is a member of the Business Continuity Institute (BCI) (<http://www.thebci.org/>) since 2008 and he holds MBCI professional credential in business continuity. To promote the art and science of business continuity, he provides various seminars and workshops related to business continuity, disaster recovery, and emergency preparedness in Japan, China, Indonesia, and England.

He is also a member of the steering committee of the "Business Continuity Management System (BCMS) Conformity Assessment Scheme" (based on ISO22301) in Japan since 2013. (<http://www.isms.jipdec.or.jp/english/bcms.html>)

He has a Bachelor's degree from Nihon University Science and Technology in Japan in mechanical engineering in 1991.

\*\*\*\*\*

**Title of Course:**        ***Business Continuity Management***

**Course Content:**

This course covers full range of business continuity management based on the BCI Good Practice Guidelines and ISO 22301/22313. The course will be provided with theoretical explanations, practical methodologies, and examples based on real cases.

The followings are the basic contents of this course, however it would be customized for each demand or interest.

**Topics Include:**

- Basic concept of business continuity management
- Policy and program management
- Understanding the organization and expectations of interested parties
- Business impact analysis
- Risk assessment
- Determining business continuity strategy
- Incident response structure and incident command system
- Business continuity plan
- Exercising and testing
- Continual improvement by operating business continuity management system (BCMS)
- Embedding business continuity into organizational culture

**Objectives:**

- To understand the reason why your organization need business continuity management
- To understand basic concept of business continuity management
- To learn various methodology related to business continuity management
- To know how to build up the business continuity strategy with understanding the expectation of the interested parties and resource requirements for critical activities for the business
- To learn basic contents of business continuity plan and essential point how to make it practical
- To know the essential of incident response
- To learn various methodology for exercising and testing of business continuity plan
- To learn the methodology to improve business continuity with the concept of business continuity management system

**REGISTER NOW!**

**Radiological Emergency Planning:**

**Terrorism, Security, and Communication Course**

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The Harvard School of Public Health Executive and Continuing Professional Education hosts a course entitled *Radiological Emergency Planning: Terrorism, Security, and Communication*. This program would be great interest to members of The International Emergency Management Society (TIEMS).

## **Radiological Emergency Planning: Terrorism, Security, and Communication Course**

July 29 - August 2, 2013 | Boston, MA | \$2,500

<https://ecpe.sph.harvard.edu/Radiological-Emergency-Planning>

This program brings together leaders in the field of emergency preparedness and planning to explore the basic principles for creating a comprehensive radiation emergency plan. Drawing from years of direct experience, faculty members will divulge lessons learned in preparing for, responding to, and communicating about radiation emergencies. By providing practical tools and guidelines, this course will prepare participants to plan for and respond to a radiological event, whether at the state, local, or individual facility level.

### **Learning Objectives:**

1. Apply the basic principles and requirements for a comprehensive radiation emergency plan
2. Comply with changes in roles and responsibilities in support of the Homeland Security effort
3. Employ a decision-making matrix to assist in state and local reaction plans for a radiological emergency
4. Incorporate lessons learned regarding communications into your emergency response plan
5. Understand the need for, and application of, protective action guides in emergency planning
6. Medically manage the casualties of a radiological incident without significant increase in risk to first responder and first receiver staff

For more information contact:

**Peter J. Bretton**

Marketing Specialist

Executive and Continuing Professional Education

Harvard School of Public Health

Phone: 617.432.2041 | Fax: 617.432.2261

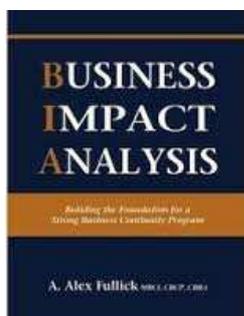
[pbretton@hsph.harvard.edu](mailto:pbretton@hsph.harvard.edu) | <https://ecpe.sph.harvard.edu/>

## **Tips, Trips, Traps and Pitfalls of Performing a Business Impact Analysis (BIA)**

*By: A.Alex Fullick, MBCI, CBCP, CBRA, v3ITIL*

*Co-Editor of the TIEMS Newsletter*

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\*\*The below article is an extract reprinted with kind permission, from the recently released book by A.Alex Fullick,

*“Business Impact Analysis: Building the Foundations for a Strong Business Continuity Program.”\*\**

Business Continuity Management (BCM), like most corporate programs, is often plagued by common mistakes. If a practitioner - whether they are new to the field or a seasoned veteran - is aware of the common mistakes they will be able to achieve a successful outcome. These common mistakes - or trips, traps and pitfalls - also apply to the Business Impact Analysis (BIA) component of a BCM program. Ensuring that these common areas are not encountered will help establish a successful BIA project which will allow the organization to continue building resilient continuity strategies from information captured during the BIA; information accepted and agreed to and relevant. The following are some common mistakes that need to be addressed to ensure that the BIA is effective:

1. *Minimal Management Support* - Senior management must buy in to the need for continued maintenance of the BCP program. The program requires on-going resources to ensure that the program is funded and there are dedicated resources assigned across the organization. The people who head up the BCP program must have the requisite training, as well as the skills to provide leadership, prioritize tasks, communicate with stakeholders, and manage the program. No Timely Follow Up of Results - A BIA is conducted almost always in support of an enterprise-wide business continuity program. The real value of a BIA is the follow-up activities that lead to effective recovery strategies being implemented based on the BIA priorities of the business processes. Occasionally, so much effort and cost is put into the BIA that business continuity planners never get around to fully implementing the follow-up recovery strategies and plans. Without the implementation of these follow-ups, the value of the BIA becomes wasted.
2. *No Agreement on Scope (Level of Detail)* - Another common mistake associated with BIAs is the failure to agree upon the level of detail that analysts should use in compiling the data. This level of detail can span an entire spectrum. On one end, some BIAs will contain relatively little detail to provide a higher-level executive view of the analysis. On the other end, and far more prevalent, are BIAs that include for each business process its corresponding input dependencies, output dependencies, recovery point objectives, recovery time objectives, and financial impacts. The common mistake here does not involve selecting the right or wrong level of detail - what's appropriate for one company may be totally inappropriate for another - but rather, failing to reach agreement among all relevant parties as to what level of detail best meets the requirements that are driving the BIA in the first place.
3. *Minimal Executive Support* - One of the factors that most influences the relative success of a BIA is the degree of executive support offered at the outset. The kickoff process usually consists of two parts: a widely distributed email and an initial presentation. The email should come from the highest level executive sponsoring the BIA and should be distributed to all parties who will be participating in the effort. The email should emphatically voice the executive's support for the project and insist on the support of all participants, particularly during the interview process.
4. *Poor Questionnaires* - An important step of any BIA is the collection of data from business units. The manner in which this data is asked for often spells the difference between a full, timely and meaningful collection of data, and one that is delayed and incomplete. One of the best ways to avoid this situation is to develop survey forms that are thorough enough to capture all relevant information and simple enough for business users to complete quickly and easily.

5. *Lack of Preparation for Interviews/Workshops* - Interviews are the cornerstone of a successful BIA, yet few planners prepare adequately for them to ensure their effectiveness. Interviewers need to learn as much as they can about a given business unit prior to the meeting, including a thorough review of the respondent's survey. Interviewers not only need to do their homework concerning the information that will be discussed, but should be mindful of the logistics involved as well.
6. *Lack of Critical Focus* - Analysts frequently make the mistake of asking business users 'what are the most important business processes within their department?' The reason this is a mistake is because virtually all critical business processes have a large degree of importance and value - otherwise they would not be designated as critical - resulting in less likelihood of it being easy to prioritize processes according to value or importance. A much better question to ask is 'how long can a business process be idle before major impact is felt? A key objective of a BIA is to prioritize business processes according to their urgency, according to how quickly impact will be felt.
7. *Focusing on the Tools Instead of the Process* - Some analysts who conduct BIAs become very focused on the tools they will be using in the collection, compiling and analyzing the data provided by the business users. The emphasis often shifts inappropriately from the process being used, to the automation that can be applied to the process. There is an inherent flaw in this approach. If a poorly designed manual process that is being used to collect and analyze the data suddenly becomes automated, what you typically end up with is a poorly designed automated process. This can lead to more problems than what you might have experienced had you not automated in the first place.
8. *Ineffective Interviewing Technique* - I have known more than a few BIA analysts who preferred to rely solely on surveys, questionnaires and emails to collect needed data. The example previously cited concerning the over-focus on tools shows how this can less than desirable results. Analysts often say that setting up interviews can be more hassle than it's worth. They will mention how interviews often start late, or may be cut short, or have to be re-scheduled, or cancelled altogether. In my experience, the real reason some BIA analysts try to steer clear of face-to-face meetings is that they tend to use ineffective techniques when interviewing business process owners. The interviewers struggle to keep the discussion focused, seldom ask open-ended questions, and may volunteer decisions such as recovery time objectives (RTOs) instead of prompting business users for this information.
9. *Insufficient Results Analysis* - Analysts conducting a BIA collect a wealth of information during the course of their efforts. But the value of this information is sometimes diminished by poor or incomplete analysis of the data. Analysts need to look for trends, patterns, relationships and discrepancies among and within the data to ensure a thorough and meaningful analysis.
10. *Unclear Presentations* - Data that is thoroughly collected and well analyzed is sometimes de-valued by an unclear or confusing presentation of the information and results. Managers in general and sponsoring executives in particular, expect BIA analysts to summarize their results in high-level presentations that are succinct and effective. Unfortunately, this does not always happen. Analysts gather a huge amount of data in the process of conducting BIA. In compiling and analyzing this data, analyst sometime err on the side of presenting too much information rather than too little.
11. *Undefined Scope* - Often, the BCP focuses entirely on system restoration. Resumption of business needs to include the people and processes required to resume operations. Many BCP programs are headed up by IT departments. 'Tunnel vision' can often cause these departments to focus on system recovery and not take the people issues into account. During an event, the people issues are often the most difficult to resolve. The scope of a business impact analysis (BIA) pertains to the number of

business units, such as Finance, Administration and IT, which will be participating in the effort. The number of business units dictates how many departments within the company will be contributing to this endeavour, which in turn determines how many individuals that BIA planners will interview to collect the necessary data for the analysis. The reason this is important is that the number of interviews directly affects the amount of time, effort, resources and expense that will be needed to complete the BIA. Many companies that attempt to conduct a BIA do not clearly define the scope of the project and consequently end up with costs, schedule and quality that is far different from what they originally intended. This results in the BIA ending up incomplete, over budget, behind schedule, or some combination of these three. The best way to avoid these types of problems is to firmly determine the scope of the effort among all principal parties at the outset, and to work within those parameters.

## **2013 INTERNATIONAL FORUM ON URBAN FLOOD CONTROL**

### **Shanghai, China; October 2013**

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The Chinese Academy of Engineering-Division of Civil Hydraulic and Architecture Engineering, China Civil Engineering Society (CCES), Chinese Hydraulic Engineering Society, Municipal Engineering Institute of CCES and Water Industry Institute of CCES will hold the 2013 International Forum on Urban Flood Control in October, in Shanghai, China.

Average annual cost of flood damage in China is great and its physical and social impacts on communities can be devastating. The forum will focus on the challenges of managing and reducing flood impacts, building community resilience and using storm water in a climate of austerity. There is no solution which can solve all these challenges but through knowledge sharing and collaboration we stand a chance.

The Forum will be a platform for Chinese and Internal Water Industry professionals including researchers, engineers, consultants, flood plain managers, urban planners, relief workers, catchment and natural resources managers, landholders and students to discuss and exchange their information, experience and knowledge.

### **Scientific Committee**

DING Xinhong	ZHANG Jianpin	ZHOU Jianguo	NIE Meisheng
WANG Hao	ZHANG Shanfa	HANG Shijun	CHENG Xiaotao
BAI Yun	ZHANG Chen	ZHENG Zingcan	CHU Chuanheng
QU Jiu-hui	LI Zechun	YANG Xiangping	YAMADA Kiyoshi
CHEN Zhikail	ZHOU Ganzhi	HOU Li'an	K. Harald Drager
ZHANG Jianyun	ZHOU Wenbo	YU Liangxin	Kuniyoshi Takeuchi
ZHANG Yan	ZHOU Qi	QIAN Yi	W.F. Gelger
ZHANG Jie	ZHANG Yun	TANG Jianguo	V. Sundar

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*Vice Chairman*  
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ZHANG Yue

GUO Liqiao  
QIU Ruitian

HAN Dehong

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### *Membership*

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LIN Jiaxiang  
ZHU Haochuan

HU Yalin  
CHEN Yingzi  
ZHANG Hong  
BAO Xuesong

LI Xiaoyu  
LI Dan  
LI Yingbin

## Topics

1. Current situation of China's urban flood control and its challenges and countermeasures
2. Global warming's impacts on and requirements for the urban flood control
3. Domestic and foreign urban flood disasters management experience
4. Planning and management of Urban flood control and drainage engineering systems;
5. Planning and management of urban flood control using systems;
6. Urban flood control and drainage standards;
7. Predicting flood hazard and adapting to risks in a changing environment;
8. Risk management and investment mechanism of urban flood control;
9. Monitoring study of urban pipeline network system based on internet of things;
10. New methods, technologies and materials in the flood control project

## Call for Papers

The organization committee invites all interested parties to submit papers. If a paper is accepted for final submission, it will be published in test, pictures or media and presented to participants. Papers that address practical problems and demonstrate original, well validated solutions found on technical principles will be particularly welcome. Please send the papers to [ifufc@wintimechina.com](mailto:ifufc@wintimechina.com) before July 31, 2013.

## Forum Language

Chinese / English

## Forum Website

Please visit the forum website at [www.ifufc.com](http://www.ifufc.com) for updates and more detailed information.

## Contact:

MS. Vicky Zhang  
Tel: +86 21 51757726 | Fax: +86 21 51757702  
Mobile: +88 13524902723  
Email: [Vicky.zhang@wintimechina.com](mailto:Vicky.zhang@wintimechina.com)

## TIEMS Service Provider Spotlight: LESS® (Norway)

LESS® IS A LEADING PROVIDER of products and solutions for patient logistics and a holistic evacuation strategy. We supply all necessary equipment to efficiently establish a casualty clearing station.

ESSENTIAL FEATURES - LESS® Evacuation System has developed over years, working with major rescue organizations, ambulance services and pre-hospital specialists in several countries. Based on field experience as well as state-of-the-art medical research, LESS AS has developed products and systems to speed up the evacuation process. From fast initial MCI triage to efficient patient logistics, from hypothermia prevention to reduced need of stretcher transfers.

THE LESS CONCEPT is used by leading ambulance/air ambulance and rescue services, airports, offshore and industry. LESS® emergency solutions are also used in national and international disaster management agencies.



With our spotlight, TIEMS Advisory Board member, A.Alex Fullick, decided to interview LESS® representative, Anders Haug Thomassen. Here's what he had to say.

**1. *How and when did LESS establish itself?***

An experienced physician in Norway had seen an increasing number of trauma patients arriving at the hospital with injuries he suspected came from numerous transfers from stretcher to stretcher. Research and development was initiated and this resulted in the foundation of LESS AS back in 2003.

The initial goal was to reduce transfer injuries.

**2. *What is the mission of LESS?***

LESS AS shall provide products that increase evacuation efficiency, take better care of patients and protect rescue personnel during the whole evacuation chain in large accidents and disasters.

**3. *What products (or services) do LESS provide that benefits disaster responders and those harmed by disasters?***

LESS AS is a leading supplier within patient logistics, of lightweight stretchers and adequate supporting products for an efficient evacuation in a coordinated rescue strategy.

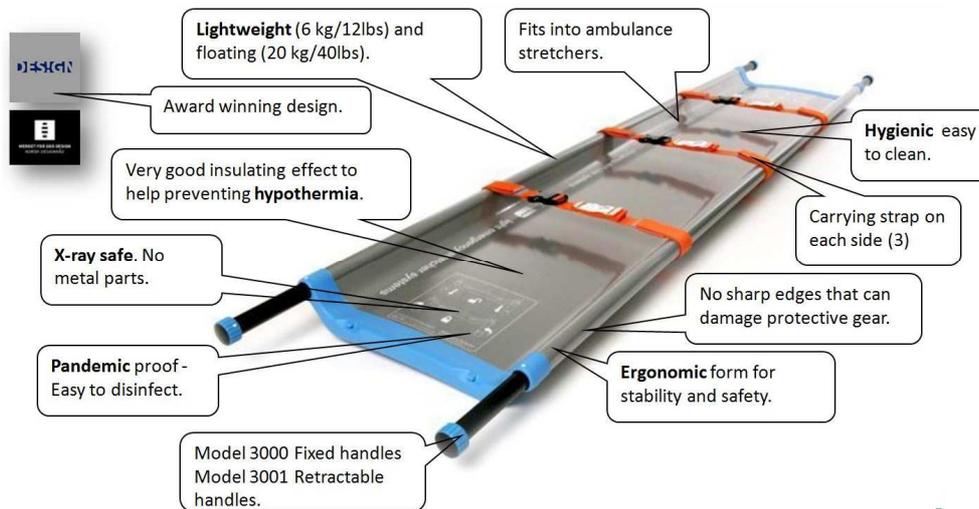
The core product is the emergency stretcher with numerous features beyond just being a transportation tool. The design is tailor made to fit into any ambulance stretcher if needed, to avoid transfer injuries. With its superb insulating effect, the stretcher helps retain the patient's body temperature and prevent hypothermia. With its extraordinary 20 kgs buoyancy in water, the stretcher is a good tool for water rescue. The stretcher is also very easy to clean and disinfect, hence it is a true multi hazard emergency stretcher for best possible preparedness. (Stretcher illustration enclosed, with main features)

In addition to the emergency stretcher itself, we offer a tailor made carrying harness for hands free carrying. This increase rescue efficiency and enable faster and safer evacuation. We offer additional hypothermia protection true a range of mass casualty thermal bags.

LESS AS has increasingly been chosen as a system solutions provider for specific risk analysis situations and difficult bottleneck situations. System solutions range from Emergency Stretcher Rolling Kits, to our container solution for tunnel preparedness. We offer entire Mass Casualty Clearing Stations organized either on trailers or in containers.

Our mass casualty incident triage system organized in a practical triage pocket for rescue personnel has in a short time become standard equipment in Scandinavian ambulance services. The easy to use, four colour systems is compatible with most international standards for triage, and can be used independently of the algorithms practiced by the paramedics involved.

All our products are designed to increase evacuation speed and efficiency and to take better care of patients with the expressed goal to save more lives.



#### **4. From a LESS perspective, what do you see as one of the greatest challenges with Emergency Management & Disaster Management?**

On a national level, there are a large number of entities involved in a large scale rescue operation. All the entities involved do not have a common platform of language (terminology), drilled routines, workflow and organization, hence coordination on the scene of the accident is a great challenge.

Studies in Scandinavia have shown that with focus on common practice and more cross-functional training, evacuation efficiency can improve significantly.

On an international level, the increased complexity and the higher number of entities involved in rescue operations makes the challenge of coordination a very difficult task. Over recent years, the UN has improved the emergency and disaster organization through clusters and designated tasks for some of the larger organizations. But this work has yet to focus on patient logistics. This is a huge challenge with substantial room for improvement, and with a substantial potential to save more lives.

#### **5. How does LESS address these challenges?**

The main challenge has proven to be the dissemination of knowledge and research to get increased understanding of how to more lives can be saved through better organization, improved systems and better tools.

We therefore use all possible channels available to us to get the message out. Dialog with authorities and NGO's is an important part of our communication. Participation in international conferences, blogs and social media has also proven to be very efficient channels.

- Facebook page: LESS Emergency Equipment
- Blog (ENGLISH): [www.lesshypothermia.wordpress.com](http://www.lesshypothermia.wordpress.com)
- Blog (ENGLISH) : [www.evaq8.wordpress.com](http://www.evaq8.wordpress.com)
- Blog (NORWEGIAN): [www.storulykke.wordpress.com](http://www.storulykke.wordpress.com)

Preparing animated graphics to illustrate the organization of an accident site has also made it easier to convey the message. An animated flash can be found on our web site and run off the website.

LESS web site: [www.less.no](http://www.less.no)

**6. Currently, LESS has a small global presence; how do you see LESS expanding in the future?**

LESS AS is currently well established in Scandinavia among emergency rescue organizations and Civil Defence. A larger international audience is gradually discovering the benefits of our system approach to patient evacuation. Through international networks, trade shows and exhibitions, we are gaining acceptance in an increasing number of international organizations. Through publication of the medical research on large scale accidents and optimal patient evacuation, the results from Scandinavia have open numerous new doors in the international market.

**7. How did LESS become involved with the TIEMS organization?**

We participated for the first time on a TIEMS conference in Romania in 2010, curious to learn more about the organization. The high quality of the speakers and the good connections we got at this event, made us put more priority into the dialogue. We have later participated at the TIEMS conferences in Suleymania, Erbil and Basrah in Iraq. We have taken the challenge of running a workshop on “Optimal Patient Evacuation”, and we see the TIEMS network as a place where we can share and develop knowledge for the mutual benefit of all participants.

**Contact Information:**

LESS AS, P.O.Box 113, NO-2858 KAPP, Norway Tel: +47 61 16 00 55 Fax: +47 61 16 00 56  
Fabrikkvegen 80, Melkefabrikken, NO-2849 KAPP, Norway www.less.no e-mail: [post@less.no](mailto:post@less.no)

***"Black Swans or just Wishful Thinking and Misinterpretation?"***

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Author: Geary W. Sikich  
Logical Management Systems, Corp., Chicago, IL - USA  
[g.sikich@att.net](mailto:g.sikich@att.net) or [gsikich@logicalmanagement.com](mailto:gsikich@logicalmanagement.com)

**Abstract:**

There seem to be a lot of sightings of “Black Swans” lately. Should we be concerned or are we wishfully thinking, caught up in media hype; or are we misinterpreting what a “Black Swan” event really is? The term “Black Swan” has become a popular buzzword for many; including, contingency planners, risk managers and consultants. However, are there really that many occurrences that qualify to meet the requirement of being termed a “Black Swan” or are we just caught up in the popularity of the moment?

There is a general lack of knowledge when it comes to rare events with serious consequences. This is due to the rarity of the occurrence of such events. Rare events present challenges for Planners, Strategists and CEO’s. Unpredictability is the new normal. Unpredictability can be positive or negative. Never under estimate the impact of change (we live in a rapidly changing, interconnected world), inflation (this is not just monetary inflation, it includes the inflated impact of improbable events), opportunity (recognize the “White Swan” effect) and the ultimate consumer (most often overlooked in contingency plans is the effect of loss of customers). This paper concludes with a discussion of 12 Steps to get from here to there and temper the impact of Black Swan events.

**1. Introduction**

There seem to be a lot of sightings of “Black Swans” lately. Should we be concerned or are we wishfully thinking, caught up in media hype; or are we misinterpreting what a “Black Swan” event really is? The term “Black Swan” has become a popular buzzword for many; including, contingency planners, risk managers and consultants. However, are there really that many occurrences that qualify to meet the requirement of being termed a “Black Swan” or are we just caught up in the popularity of the moment?

The definition of a Black Swan according to Nassim Taleb, author of the book “The Black Swan: The Impact of the Highly Improbable” is:

*“A black swan is a highly improbable event with three principal characteristics: it is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was.”*

## **2. The Case Against Black Swan Events**

I am developing an argument that there really are no “Black Swan” events. If you have never experienced an extremely rare event with significant consequences how do you know if you are experiencing one? And, if you experience an extremely rare event is it really a “Black Swan” - i.e., is it really rare? There are over 7 billion people in the world, all experiencing things each day - what is rare?

An alternative definition or description if you prefer, for “Black Swans” is provided below by cobbling together statements from Kenneth Posner, author of “Stalking the Black Swan;” Dan Gardner, author of “Risk: Why we fear things we shouldn’t - and put ourselves in greater danger;” and Daniel Kahneman, author of “Thinking, Fast and Slow.” The alternative definition or if you prefer, description, of a “Black Swan” might read something like this:

*“A Black Swan is a term used to describe one manifestation of uncertainty based on flawed stories of the past that shape our views of the world and our expectations of the future and influenced by the interaction of opinions and decisions that can affect future outcomes. Events are labelled “Black Swans” as a result of illusory insights formed by the brain, the media and people and organizations with an interest in stoking fears; thereby creating a circuitry of fear. In effect, what you see is not all there really is.”*

## **3. The Problem**

There is a general lack of knowledge when it comes to rare events with serious consequences. This is due to the rarity of the occurrence of such events. In his book, Taleb states that *“the effect of a single observation, event or element plays a disproportionate role in decision-making creating estimation errors when projecting the severity of the consequences of the event. The depth of consequence and the breadth of consequence are underestimated resulting in surprise at the impact of the event.”*

To quote again from Taleb, *“The problem, simply stated (which I have had to repeat continuously) is about the degradation of knowledge when it comes to rare events (“tail events”), with serious consequences in some domains I call “Extremistan” (where these events play a large role, manifested by the disproportionate role of one single observation, event, or element, in the aggregate properties). I hold that this is a severe and consequential statistical and epistemological problem as we cannot assess the degree of knowledge that allows us to gauge the severity of the estimation*

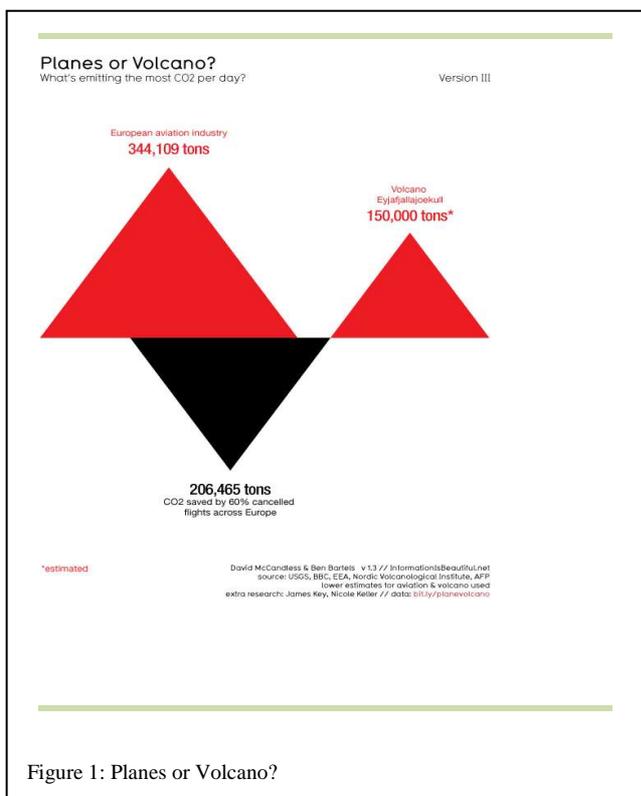
errors. Alas, nobody has examined this problem in the history of thought, let alone try to start classifying decision-making and robustness under various types of ignorance and the setting of boundaries of statistical and empirical knowledge. Furthermore, to be more aggressive, while limits like those attributed to Gödel bear massive philosophical consequences, but we can't do much about them, I believe that the limits to empirical and statistical knowledge I have shown have both practical (if not vital) importance and we can do a lot with them in terms of solutions, with the "fourth quadrant approach", by ranking decisions based on the severity of the potential estimation error of the pair probability times consequence (Taleb, 2009; Makridakis and Taleb, 2009; Blyth, 2010, this issue)."

There was a great deal of intense media focus (crisis of the moment) on the eruption of the Icelandic volcano Eyjafjallajökull and the recent Deepwater Horizon catastrophe. Note that less attention was paid by the media to a subsequent sinking of the Aban Pearl, an offshore platform in Venezuela that occurred on 13 May 2010.

Some have classified the recent eruption of the Icelandic volcano Eyjafjallajökull and the Deepwater Horizon catastrophe as Black Swan events. If these are Black Swans, then shouldn't we classify the Aban Pearl also a Black Swan? Or is the Aban Pearl not a Black Swan because it did not get the media attention that the Deepwater Horizon has been receiving? Please note also that Taleb's definition of a Black Swan consists of three elements:

*"it is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random"*

While the above cited events have met some of the criteria for a "Black Swan" - unpredictability; the massive impact of each is yet to be determined and we have yet to see explanations that make these events appear less random.



Interestingly, the Icelandic volcano Eyjafjallajökull may qualify as a "White Swan" according to Taleb in his latest version of "The Black Swan" recently published. Eyjafjallajökull on 20 April 2010 (the date of the Deepwater Horizon event) was emitting between "150,000 and 300,000" tons of CO2 a day. This contrasted with the airline industry emissions of almost 345,000 tons, according to an article entitled, "Planes or Volcano?" originally published on 16 April 2010 and updated on 20 April 2010 (<http://bit.ly/planevolcano>).

We can only estimate the potentially massive impact of the Deepwater Horizon event on the long term environment of the Gulf of Mexico. President Hugo Chavez announced the sinking of the Aban Pearl on Twitter, saying: "To my sorrow, I inform you that the Aban Pearl gas platform sank moments ago. The good news is that 95 workers are safe."

Venezuela's energy and oil minister, Rafael Ramirez, said there had been a problem with the flotation system of the semi-submersible platform, causing it to keel over and sink. Ramirez also said a tube connecting the rig to the gas field had been disconnected and safety valves activated, so there no risk

of any gas leak. The incident came less than a month after an explosion that destroyed the Deepwater Horizon rig in the Gulf of Mexico. At the time of this writing oil prices are actually declining instead of rising as would be the expected outcome of a Black Swan event (perhaps we should rethink Deepwater Horizon and Aban Pearl and classify them as “White Swan” events?). What may be perceived as or classified as a Black Swan by the media driven hype that dominates the general populace may, in fact, not be a Black Swan at all for a minority of key decision makers, executives and involved parties. This poses a significant challenge for planners, strategists and CEO’s.

#### 4. Challenges for Planners, Strategists and CEO’s

I would not necessarily classify the recent eruption of the Icelandic volcano Eyjafjallajokull and the Deepwater Horizon catastrophe or the Aban Pearl sinking as Black Swan events although their impact (yet to be fully determined) may be far reaching. As they are not unexpected - the volcano existed and has erupted before and offshore rigs have exploded and sunk before (i.e., Piper Alpha 6 July 1988, killing 168 and costing \$1,270,000,000.00). The three events cited do have Black Swan qualities when viewed in context to today’s complex global environment. This I believe is the Strategist, Planner and CEO’s greatest challenge - to develop strategies that are flexible enough to adapt to unforeseen circumstances while meeting corporate goals and objectives. This requires a rethinking of contingency planning, competitive intelligence activities and cross-functional relationships internally and externally.

The “Big Bang” – Complex Systems – Black Swan Events

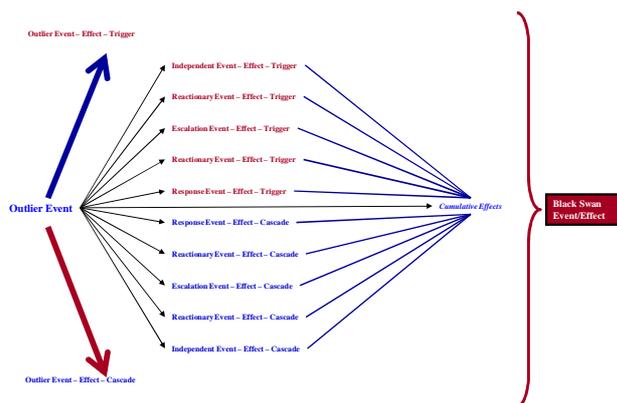


Figure 2: Complex Systems – Black Swan Events

Figure 2, entitled, “Complex Systems - Black Swan Events,” depicts the effect of an outlier event that triggers independent events and reactionary events that result in a cumulative Black Swan event/effect. Figure 2 recognizes four elements:

- Agents (Outlier Events) acting in parallel
- Continuously changing circumstances
- Reactionary response creates potential cascades resulting in cumulative effects
- Lack of pattern recognition leads to a failure to anticipate the future

How does one overcome the cumulative effect of outlier events? We have to rethink business operations and begin to focus on what I will term “Strategy at the edge of chaos.” This should not be considered a radically new concept in management thinking; rather it recognizes that while strategic concepts are the threshold of management theory, appropriate strategic responses do not always happen fast enough. Markets are not in a static equilibrium; the ongoing crisis in Europe has cascaded from Greece to concerns over the banking systems in Spain, Portugal, Italy and Ireland. Greece may leave the European Union. Markets and organizations tend to be reactive, evolving and difficult to predict and control.

#### 5. Added Value to Integrative Risk Management

## 5.1 Complex Adaptive Systems

Unpredictability is the new normal. Rigid forecasts, cast in stone, cannot be changed without reputational damage; therefore strategists, planners and CEO's are better served to make assumptions - an assumption can be changed, adjusted - assumptions are flexible and less damaging to an enterprise's (or person's) reputation. Unpredictability can be positive or negative. Never underestimate the impact of change (we live in a rapidly changing, interconnected world), inflation (this is not just monetary inflation, it includes the inflated impact of improbable events), opportunity (recognize the "White Swan" effect) and the ultimate consumer (most often overlooked in contingency plans is the effect of loss of customers).

## 5.2 Analysis of Competing Hypotheses

Analysis of Competing Hypotheses (ACH) is an analytic process that identifies a complete set of alternative hypotheses, systematically evaluates data that is consistent and inconsistent with each hypothesis and rejects hypotheses that contain too much inconsistent data (i.e., "Black Swan" type events). It is a simple model for how to think about complex problems. The ACH methodology was developed by Richards J. Heuer, Jr. ACH is particularly useful for issues that require a careful weighing of alternative explanations of what has happened or is happening. It can also be used to provide early warning or to help evaluate alternative scenarios of what might happen in the future. Heuer outlines the ACH process in considerable depth in his book, *Psychology of Intelligence Analysis*. It consists of the following steps:

- *Hypothesis* - The first step of the process is to identify all potential hypotheses. Cognitive bias is minimized when all possible hypotheses are considered.
- *Evidence* - The next step is to list evidence and arguments (including assumptions and logical deductions) for and against each hypothesis.
- *Diagnostics* - The third step is to develop a matrix, applying evidence against each hypothesis in an attempt to disprove as many theories as possible. This step is the most important, according to Heuer.
- *Refinement* - The fourth step is to review findings, identify any gaps and collect any additional evidence needed to refute as many of the remaining hypotheses as possible.
- *Inconsistency* - The fifth step is to draw tentative conclusions about the relative likelihood of each hypothesis. Less consistency implies a lower likelihood. The least consistent hypotheses are eliminated.
- *Sensitivity* - The sixth step is to test conclusions using sensitivity analysis, which weighs how the conclusion would be affected if key evidence or arguments were wrong, misleading, or subject to different interpretations. The validity of key evidence and the consistency of important arguments are double-checked to assure the soundness of the conclusion's linchpins and drivers.
- *Conclusions and Evaluation* - The final step is to provide conclusions, as well as a summary of alternatives that were considered and why they were rejected.

## 5.3 12 Steps to get from here to there and temper the impact of Black Swans

Michael J. Kami author of the book, "Trigger Points: how to make decisions three times faster," wrote that an increased rate of knowledge creates increased unpredictability. The Stanley Davis and Christopher Meyer authors of the book "Blur: The Speed of Change in the Connected Economy," cite Speed - Connectivity - Intangibles as key driving forces. If we take these points in the context of the Black Swan as defined by Taleb we see that our increasingly complex systems (globalized economy, etc.) are at risk. Kami outlines 12 steps in his book that provide some useful insight. How you apply them to your enterprise can possibly lead to a greater ability to temper the impact of a Black Swan event(s).

- Step 1: **Where Are We?** Develop an External Environment Profile  
Key focal point: What are the key factors in our external environment and how much can we control them?
- Step 2: **Where Are We?** Develop an Internal Environment Profile  
Key focal point: Build detailed snapshots of your business activities as they are at present.
- Step 3: **Where Are We Going?** Develop Assumptions about the Future External Environment  
Key focal point: Catalogue future influences systematically; know your key challenges and threats.
- Step 4: **Where Can We Go?** Develop a Capabilities Profile  
Key focal point: What are our strengths and needs? How are we doing in our key results and activities areas?
- Step 5: **Where Might We Go?** Develop Future Internal Environment Assumptions  
Key focal point: Build assumptions, potentials, etc. Do not build predictions or forecasts! Assess what the future business situation might look like.
- Step 6: **Where Do We Want to Go?** Develop Objectives  
Key focal point: Create a pyramid of objectives; redefine your business; set functional objectives.
- Step 7: **What Do We Have to Do?** Develop a Gap Analysis Profile  
Key focal point: What will be the effect of new external forces? What assumptions can we make about future changes to our environment?
- Step 8: **What Could We Do?** Opportunities and Problems  
Key focal point: Act to fill the gaps. Conduct an opportunity-problem feasibility analysis; risk analysis assessment; resource-requirements assessment. Build action program proposals.
- Step 9: **What Should We Do?** Select Strategy and Program Objectives  
Key focal point: Classify strategy and program objectives; make explicit commitments; adjust objectives.
- Step 10: **How Can We Do It?** Implementation  
Key focal point: Evaluate the impact of new programs.
- Step 11: **How Are We Doing?** Control  
Key focal point: Monitor external environment. Analyze fiscal and physical variances. Conduct an overall assessment.
- Step 12: **Change What's not Working** Revise, Control, Remain Flexible  
Key focal point: Revise strategy and program objectives as needed; revise explicit commitments as needed; adjust objectives as needed.

I would add the following comments to Kami's 12 points and Davis, Meyer point on speed, connectivity, and intangibles. Understanding the complexity of the event can facilitate the ability of the organization to adapt if it can broaden its strategic approach. Within the context of complexity, touch points that are not recognized create potential chaos for an enterprise and for complex systems. Positive and negative feedback systems need to be observed/acted on promptly. The biggest single threat to an enterprise will be staying with a previously successful business model too long and not being able to adapt to the fluidity of situations (i.e., Black Swans). The failure to recognize weak cause-and-effect linkages, small and isolated changes can have huge effects. Complexity (ever growing) will make the strategic challenge more urgent for strategists, planners and CEO's.

Taleb offers the following two definitions in his book "The Black Swan," The first is for "Mediocristan;" a domain dominated by the mediocre, with few extreme successes or failures. In Mediocristan no single observation can meaningfully affect the aggregate. In Mediocristan the present is being described and the future forecasted through heavy reliance on past historical information. There is a heavy dependence on independent probabilities

The second is for "Extremeistan;" a domain where the total can be conceivably impacted by a single observation. In Extremeistan it is recognized that the most important events by far cannot be predicted; therefore there is less dependence on theory. Extremeistan is focused on conditional probabilities. Rare events must always be unexpected, otherwise they would not occur and they would not be rare.

When faced with the unexpected presence of the unexpected, normality believers (Mediocristanians) will tremble and exacerbate the downfall. Common sense dictates that reliance on the record of the past (history) as a tool to forecast the future is not very useful. You will never be able to capture all the variables that affect decision making. We forget that there is something new in the picture that distorts everything so much that it makes past references useless. Put simply, today we face asymmetric threats (Black Swans and White Swans) that can include the use of surprise in all its operational and strategic dimensions and the introduction of and use of products/services in ways unplanned by your organization and the markets that you serve. Asymmetric threats (not fighting fair) also include the prospect of an opponent designing a strategy that fundamentally alters the market that you operate in.

## **6. Conclusion**

Taleb, in the revised 2nd edition, of "The Black Swan" posits the following: "How much more difficult is it to recreate and ice cube from a puddle than it is to forecast the shape of the puddle from the ice cube?" His point is that we confuse the two arrows: Ice cube to Puddle is not the same as Puddle to Ice cube. Ice cubes and puddles come in different sizes, shapes, etc. Thinking that we can go from theory to practice and practice to theory creates the potential for failure.

While the Icelandic volcano will have non-regulatory consequences that could as yet, be far reaching, the regulatory deluge to be expected as a result of Deepwater Horizon could be a watershed event for the offshore drilling industry, much as the Oil Pollution Act of 1990 changed many oil companies' shipping operations.

It takes over 85 million barrels of oil per day globally, as well as millions of tons of coal and billions of cubic feet of natural gas to enable modern society to operate as it does. We fail to see transparent vulnerabilities because they are all too recognizable and therefore are dismissed all too readily. Instead we mislabel events "Black Swans" because we get caught up in the moment and forget that all we see is not necessarily all there is. In order to overcome the trap of transparent vulnerabilities, and mislabelled "Black Swans" we need to overcome our natural tendency toward diagnostic bias.

A diagnostic bias is created when four elements combine to create a barrier to effective decision making. Recognizing diagnostic bias before it debilitates effective decision making can make all the

difference in day-to-day operations. It is essential in crisis situations to avert compounding initial errors. The four elements of diagnostic bias are:

- Labelling**
- Loss Aversion**
- Commitment**
- Value Attribution**

Labelling creates blinders; it prevents you from seeing what is clearly before your face - all you see is the label. Loss aversion essentially is how far you are willing to go (continue on a course) to avoid loss. Closely linked to loss aversion, commitment is a powerful force that shapes our thinking and decision making. Commitment takes the form of rigidity and inflexibility of focus. Once we are committed to a course of action it is very difficult to recognize objective data because we tend to see what we want to see; casting aside information that conflicts with our vision of reality. First encounters, initial impressions shape the value we attribute and therefore shape our future perception. Once we attribute a certain value, it dramatically alters our perception of subsequent information even when the value attributed (assigned) is completely arbitrary.

Recognize that we are all swayed by factors that have nothing to do with logic or reason. There is a natural tendency not to see transparent vulnerabilities due to diagnostic biases. We make diagnostic errors when we narrow down our field of possibilities and zero in on a single interpretation of a situation or person. While constructs help us to quickly assess a situation and form a temporary hypothesis about how to react (initial opinion) they are restrictive in that they are based on limited time exposure, limited data and overlook transparent vulnerabilities.

The best strategy to deal with disoriented thinking is to be mindful (aware) and observe things for what they are (situational awareness) not for what they appear to be. Accept that your initial impressions could be wrong. Do not rely too heavily on pre-emptive judgments; they can short circuit more rational evaluations. Are we asking the right questions? When was the last time you asked, "What Variables (outliers, transparent vulnerabilities) have we Overlooked?"

My colleague, John Stagl adds the following regarding value. Value = the perception of the receiver regarding the product or service that is being posited. Value is, therefore, never absolute. Value is set by the receiver.

Large events, rare events and events with perceived impacts are supposed to have consequences, and consequences need causes to explain them. Sudden shifts in the level of volatility make it inherently difficult to forecast due to complexities of the fundamental world that are influenced by the collective behaviour of people and feedback effects. Events labelled as "Black Swans" are but one manifestation of uncertainty, based on the perception that what you see is all there is.

Some final thoughts:

- If your organization is content with reacting to events it may not fair well
- Innovative, aggressive thinking is one key to surviving
- Recognition that theory is limited in usefulness is a key driving force
- Strategically nimble organizations will benefit
- Constantly question assumptions about what is "normal"

Ten blind spots:

- #1: Not Stopping to Think
- #2: What You Don't Know Can Hurt You
- #3: Not Noticing
- #4: Not Seeing Yourself
- #5: My Side Bias
- #6: Trapped by Categories
- #7: Jumping to Conclusions
- #8: Fuzzy Evidence
- #9: Missing Hidden Causes
- #10: Missing the Big Picture

In a crisis you get one chance - your first and last. Being lucky does not mean that you are good. You may manage threats for a while. However, luck runs out eventually and panic, chaos, confusion set in; eventually leading to collapse. We tend to mislabel events as "Black Swans" as a result of falling prey to "what you see is all there is" thinking.

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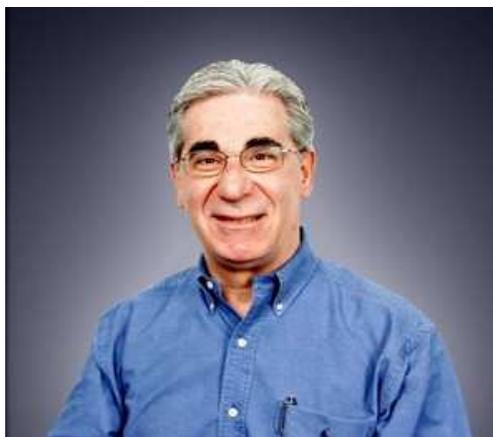
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## Is Risk Really Indefinable?

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Author: Geary W. Sikich  
 Logical Management Systems, Corp., Chicago, IL - USA  
[g.sikich@att.net](mailto:g.sikich@att.net) or [gsikich@logicalmanagement.com](mailto:gsikich@logicalmanagement.com)



Let's face it - no one really understands risk. There are so many definitions and so many aspects that to claim to be an expert on risk is easily accomplished. Sorry for this diversion, the velocity of risk just caught up with me and the magnitude of its impact has stunned my senses.

How can we accurately define risk tolerance when risk is defined so differently by segments, departments, etc. within an enterprise? The emergence of risk professionals who come from a variety of backgrounds, non-financial, security, business continuity all focus on risk within the context of their specialty area - for example risk tolerance for a security professional claiming to be a risk management expert may focus on the ability of the enterprise to withstand a variety of security threats - physical as well as cyber. Whereas a financial professional claiming to be a risk management expert may focus on risk tolerance with regard to currency fluctuations. Universally accepted definitions are a wonderful thing to aspire to, however, it seems that we may have a long way to go to get universal acceptance of "risk tolerance's" meaning.

Considering the risk - you might look at what you can do to buffer the impact. It does not appear that you can eliminate the risk and mitigation is not a one-time effort and forgets it. Your strategy should collectively look at long term buffering of the risk in order to reduce its impact should it be realized (i.e., an event). Also, look at cascading effects and causal opacity that would hide or make less clear interconnected issues (risks) that are not readily or directly associated with the primary risk of system damage. Just some quick thoughts - contact me if you wish to pursue a further discussion in more detail.

The management of risk has to be part and parcel of how the business goes about its business. Its needs to be threaded into the very fabric of the culture of the business, and an integral part of how it makes decisions.

To facilitate this, the business needs to have the following:

1. A clear business plan - whether this is short, medium, or long term.
2. It needs to identify and understand the risks inherent in this business plan, and that comprehension needs to incorporate both the external as well as the internal factors. It needs to understand all of the 'things' that it is, or will potentially be exposed to, that would otherwise frustrate the delivery and achievement of its business plan - or worse, threaten the viability of the business.
3. Management need to be tasked with designing and implementing controls to mitigate those risks. These controls should be - wherever possible - designed into systems and processes - therefore compliance with those processes, on a day-to-day basis - should ensure an appropriate control environment, aligned to the business plan and risk profile of the business.

I would add that it also has to factor in transparent vulnerabilities, outliers, interconnections, opacity, internal and external tolerance levels - i.e., customer tolerance level (CTL) (how long with they stay a customer if I have a crisis?). I am sure that this list could expand greatly. I agree that the business plan has to be developed and it has to be communicated - goals and objectives - in order for execution to stay focused on the goals and objectives. A risk, threat, hazard, vulnerability and consequence matrix can be developed - however, it needs to be undertaken with "Active Analysis" as part of the process. Competitive Intelligence professionals, if you have them on staff, should be engaged to assist risk management and business continuity professionals develop "Early Warning Indicators" that facilitate managements' effectively implementing controls and making these controls viable on a day-to-day basis.

Sovereign Base Areas: few are aware that UK has sovereign authority over the two large military base areas of Cyprus: Episkopi/Akrotiri and Dhekelia. Actually, having bases in a country with potential for a debt default does present some risk issues that should be raising concerns for any country with Sovereign Base Areas. Thanks for bringing this out; it a good one to cite for national security concerns.

One of the top should be the mind. CI is a thinking activity first and a doing activity once you have developed a plan for execution. Analysis tools vary from home grown to sophisticated math

models, etc. I think that recognition of how our minds shape and focus the CI effort is critical (biases). I would also add that it is necessary to rethink the role of CI when it comes to interfacing with business continuity, risk and strategic planning professionals.

Pat: Regarding your response - "I don't think the mine could be considered an unknown nor was it an event. It was a newly discovered hazard with the potential to create an event "explosion" which in turn would cause the event "pipeline damaged"."

My point is that BP did not know about the mine when the pipeline was constructed and if a business impact assessment, risk assessment, hazard analysis, etc., was done they missed a big one! Fortunately, they also missed a potentially devastating event. So, perhaps a "Should Have Known - Unknown"? Depth of analysis can reveal many things that are overlooked because time has rendered knowledge less accessible.

Geary, as you know, this is a familiar theme for me...'Complexity: structural engineering for business survival' <http://wp.me/p16h8c-V6> Even if the fundamentals are, initially, taken care of, identifying, mapping, monitoring and managing interconnections is an impossible task given conventional tools and techniques. Objectively measuring the integrity of multi-scalar interactions on an ongoing basis [in real-time if necessary] may as well be the stuff of science fiction for Risk Management!

So, as soon as the structure with any embedded RM metrics is formed it changes with the first 'risk decision' and, as we know, in complex systems even minor deviations/errors can have an incalculable impact [Butterfly Effect]. Similarly as the Global financial sector has 'eloquently' illustrated "High Impact Low Probability" events CANNOT be ignored. YET 'conventional ignorance' [<http://wp.me/p16h8c-ot>] prevails across FS to the considerable detriment of communities and economies across the globe!

There is little evidence of any meaningful thought leadership so we should all be grateful for discussions like this.

Two recent works which you might find helpful are: 'Structured Analytic Techniques for Intelligence Analysis', by Richards J. Heuer Jr. and Randolph H. Pherson; and 'Analysis Without Paralysis', by Babette E. Bensoussan and Craig S. Fleisher. Both are available from Amazon.com.

One has to be cognizant of the risk, have an understanding of the potential consequences and be able to estimate the likelihood of occurrence in order to have a concept of defining "risk". This complicates things, as we do not each experience risk in the same manner.

A complete definition of risk comprises three dimensions:

1. the event
2. the likelihood
3. The consequence.

A "risk" without an event [likelihood + consequence] = "exposure"

A "risk" without a likelihood [event + consequence] = "a concern"

A "risk" without a consequence [event + likelihood] = "an uncertainty"



... And in common usage, each of these is sufficient to be called a risk - but that is not sufficient to be able to manage it, and that is what this group is concerned with.

Hypothetical - If growth is synonymous with distance, the rate of change of growth through time (change of distance thro' time in a certain direction - speed with direction = velocity) is called acceleration in science!

So, it looks like risk velocity makes sense in cases of liquidity and market risks. Also, it can add value to business continuity planning. In these cases, the benefits of understanding risk velocity during the risk assessment process should actually outweigh the level of effort costs. I have not seen this term used frequently in practice, either qualitatively or quantitatively.

In physics speed is the first derivative of distance with respect to time, and is the magnitude of velocity. Speed is a scalar, and velocity a vector which has direction.

Velocity measures the change of position over time.

Acceleration is first derivative of velocity with respect to time, or the second derivative of distance with respect to time. Acceleration measures the change of velocity over time.

The rate of change of a magnitude over time appears in the following Greeks: Theta, Delta decay, Vega decay and Gamma decay (some of these go by other names). To my knowledge there is no Greek with a second order derivative with respect to time, but I am always keen to learn.

It would appear that the notion of acceleration has not yet entered the fast moving world of finance.

So, it looks like risk velocity makes sense in cases of liquidity and market risks. Also, it can add value to business continuity planning. In these cases, the benefits of understanding risk velocity during the risk assessment process should actually outweigh the level of effort costs. I have not seen this term used frequently in practice, either qualitatively or quantitatively.

My only reservation on risk universe and other constructs is that risks, like events, are not shared by everyone in the same way and therefore it may be difficult to create a risk universe with a continuum of understanding and appreciation that can be accepted by all.

In high speed trading, esp. if all the stocks are traded on only ONE exchange as in most countries, outside of the US & certain parts of Europe, the use of circuit breakers 'might' help mitigate some of the risks posed by 'risk velocity'. However, the flash crash incident 2 years back in the US suggests that unless the alternative exchanges & other MTFs are also regulated the same way as the 2 main exchanges - NYSE & NASDAQ - the advantage of HFTs would not be lessened in terms of price arbitrage opportunities across the various MTFs compared to if there is standardized regulation, incl. the SAME circuit breaker thresholds.

Martin, agreed and that's why transition management works better in N America compared to Asia because of the availability of "liquidity" (there's lack of transparency, of course in breaking down the trading lots of large blocks) across the MTFs.

"Speed measures the rate of change of Gamma with respect to changes in the underlying spot price. This is also sometimes referred to as the gamma on gamma and is a third derivative of the value function with respect to the underlying price."

Something that has a high velocity is fast moving, its rate of change is higher but I totally agree with you and David on acceleration and physics.

A risk has high growth rate - that would surely be a measure of velocity.

Risk has a growth rate that is increasing - this couldn't be anything other than acceleration if we were to apply the laws of physics and why apply anything else.

So then we have:

- Risk Frequency
- Risk Magnitude
- Risk Velocity
- Risk Acceleration

These definitions would be in line with properties found in physics and can be applied using statistics.

In market risk, it kind of goes like the following:

[] 1st level Greeks

- Sigma < Pure volatility
- Delta
- Vega
- Theta
- Rho

[] 2nd level Greeks

- Gamma << Second order measure with respect to time (gamma is the change of delta against the spot price and Delta is a first order Greek)
- Vanna
- Vomma
- Charm

[] 3rd level Greeks

- Ultima
- Speed
- Zomma
- Color

I am a big fan of the market Greek risk measures because they describe exposure in all its various dimensions. I believe we can translate this kind of thinking into other risk disciplines of risk measurement such as operational risk and velocity is an attempt to do that.

So magnitude and frequency would be first order direct measurements.

The growth/decay of magnitude or frequency through time would be a second order measurement. The change of growth is another order of measurement.

Do I carry out these measurements, I personally do but I also recognize that it isn't current practice. Current practice is  $F \times M$  which is a hopeless measure of nothing. It is like sampling or observing all the fraudulent cases in a loan department by looking at only one contract!

Robert is right though, velocity is the constant change of distance travelled through time, it is fundamentally a 1st order and basic measurement.

I have a risk with magnitude moving from \$1 to \$100 (a change) in a micro second and that would be fast moving or faster I should say than if that change happened over a hundred years.

I personally see liquidity risk as implicative in velocity, the higher your margining, the more impacted you will become by raw sigma or volatility.

In this sense, I would also agree with Geary. High frequency trading usually uses massive leverage to achieve high returns over a short period of time. We are changing our function of liquidity to borrow into time by lifting up the leverage and in doing so may be hurt by liquidity risk as a consequence of raw volatility or sigma. So then, high frequency trading only really works in liquid markets, I am afraid so.

Opacity and interconnectedness have blurred the single point of failure logic. Too many things are unseen (transparent vulnerabilities) that have a consequential effect on events.

We know very little about how different highly disruptive, nonlinear changes might interact with and amplify one another.

My only reservation on risk universe and other constructs is that risks, like events, are not shared by everyone in the same way and therefore it may be difficult to create a risk universe with a continuum of understanding and appreciation that can be accepted by all.

Geary's comment re: risk universe serves as a good caveat - they are always very client specific, so although the basic premise is transferable, what one firm refers to as 'strategic risk' will not necessarily be the same as another - the key thing, however, is that it is commonly understood and in use within the business (there are some exceptions to this in regulated environments, for example operational risk within financial services businesses).

Ehtisham makes a good point that velocity is a vector and not a magnitude and I certainly support using the terminology of engineering and science correctly - refer to <http://en.wikipedia.org/wiki/Velocity> . Management has a diversity of ill-defined woolly terms as does risk management and it spawns a variety of LinkedIn debates based on these multiple confusions. Imprecision of terms and their use limits how effective a body of knowledge can be.

Because a given risk may change its magnitude over time does not imply the risk has moved in space time although it may give rise to such an illusion. As an example if we get exposed to asbestos fibres the risk of ill health or early death changes as time progresses but the risk is just changing, it is not moving through time so therefore has no speed.

Where the change in a risk is a continuous function we can calculate various order derivatives but we should not inappropriately name them. Conceptually claiming that a risk travels in time rather than changes over time is a bad idea in my view. The value of a house may change over time but the house does not move although we may say house prices have changed or they are changing rapidly. Some may say colloquially that house changes have moved but that is not good grammar.

Our own lives progress with the passage of time but do we say it has a speed or velocity? Risk is confusing enough without muddying the waters further.

Is it a case of well-intentioned but potentially misguided intervention on the part of regulators? I see more and more of this activity - less informed regulators attempting to control a "runaway train" with regulations that inhibit and penalize rather than guide and educate.

In science and technology velocity or speed relates to the change of a parameter with respect to time. Some examples are:

In chemistry the velocity of a reaction is the change of molar concentration of a reactive with respect to time.

The speed of film measures the change in exposure with respect to time.

Properly understood the concept of velocity is also useful and meaningful when applied to finance and risk.

The Greek Speed (aka Gamma on Gamma) is the third order derivative of Value with respect to Spot price:  $d^3V/dS^3$ . It has nothing to do with the concepts of speed, velocity or acceleration.

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