

4th in the series, SMi present

OIL AND GAS CYBER SECURITY

Quality Hotel 33, Økern | Oslo, Norway

3rd & 4th JUNE 2014

Securing the future of the industry against the continued cyber threat



www.oilandgas-cybersecurity.com

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Oil and Gas Cyber Security 2014

Day One | Tuesday 3rd June 2014

08.30	Registration & Coffee		OPERATOR CASE STUDIES- PART 1			
09.00	Welcome introduction David Alexander, Principal Consultant, Regency IT Consulting	Applied Risk	 A Perspective on Cyber Security as Applied to Process Safety Relationship between Safety (SIL) and Security (SAL) Trends and Emerging Cyber Threats Related to Process 			
09.10	OPENING ADDRESS H.M. Ambassador Jane Owen, British Embassy, Norway	ri Ri	Safety • Potential Impact and Consequences • Proposed safeguards and control			
09.30	 Gap between threats and preventive measures - Head findings in The Norwegian Business and Security Council's Information Security and Cybercrime survey 2012 Norway is facing similar trends as the rest of the world, cyber-attacks are increasing at an alarming rate. Most companies are unprepared to handle such attacks Companies are more and more dependent on IT Arne Røed Simonsen, Senior Advisor, Norwegian Business and Industry Security Council (NSR) 	14.40	 Jalal Bouhdada, Founder and Principal Security Consultant, Applied Risk Industrial Systems – Practical Security We have the Technology, but what else do we need to consider? Firewalls, DMZ, Password Protection, AntiVirus Protection etc. We have much in the way of technological solutions which help in protecting your IT infrastructure from the Cyber Opportunists. But is it enough? What are the other options that you have to consider i you are wanting to protect your Industrial IT infrastructure? Ewen MacDonald, Lead Instrument and Systems Enginee Total E&P The cyber security indicator SMC background & context Cyber-attacks, the digitized poor's weapon Why these companies are under attack Alert level should be matched with a cyber-security 			
10.10	Live Attack Simulation - How to survive or avoid a DDoS attack • How to simulate different types of cyber attacks to test your network infrastructure • Watch a live simulation of a DDoS attack – learn - How a cyber attack works and effects your enterprise - How to avoid cyber attacks or survive them if you must Andy Young, Senior Cyber Systems Engineer, Ixia Technologies	15.10				
10.50	Morning Coffee		indicator Ammar Qatan, Information Technology Manager,			
MATERFALL [*] 11.50	Innovation in Industrial Perimeter Security • Real-Time SCADA protection • Historian systems protection • NERC / CIP Compliance • Hardware based unidirectional Data Transfer • Secure remote monitoring and management Paul Charchaflian, European Sales Director, Waterfall Security Solutions	15.40 16.10	Salalah Methanol Company Afternoon Tea Behind the meter: Securing the energy that powers of gas systems • The neglected vulnerability that goes into oil & gas systems • Islanding and distributed energy applications for oil gas systems			
12.00	 Strategies for Protecting and Handling Targeted Sophisticated Attacks (such as Stuxnet) What if the Macondo explosion was a deliberate cyber security attack? Targeted sophisticated attacks (such as Stuxnet) - their characteristics Strategies for detecting and handling targeted attacks Collaborative Incident Response on Oil and Gas installations Center for Cyber and Information Security - Gjøvik University College Siv Hilde Houmb, Associate Professor II, NISlab, Gjøvik University College 	16.40	 Technological solutions to secure energy systems Risk reduction and recovery methods Dr Gal Luft, Co-Director, Institute for the Analysis of Global Security, Senior Adviser, United States Energy Security Council Industrial Control Systems Security Introduction- where are ICS attacks being targeted? ICS vs. IT World- Creating a comprehensive security framework Security Framework- How to improve protection levels against cyber threats Risk Tolerance Levels- 3 parts to identifying associated risks Threat vulnerability and consequence Conclusion- Achieving the desired security confidence 			
12.30	 How cyber security is transforming security New cybersecurity challenges Gaps to fill with traditional IS/IT security approaches Cybersecurity transformation examples: risks and incidents management 	17.10	level Bandar Mesned Al Saifi, Data Network Engineer, Saudi Aramco Chairman's Closing Remarks and Close of Day One David Alexander, Principal Consultant, Regency IT Consulting			
13.00	Jacques Sibué, Group CISO, GDF Suez Networking lunch- Sponsorship opportunities available		Evening Drinks Reception British Ambassador's Residence, Oslo			

Register online at www.oilandgas-cybersecurity.com • Alternatively

Oil and Gas Cyber Security 2014 Day Two | Wednesday 4th June 2014

08.30 Registration & Coffee

Chairman's Opening Remarks 09.00 David Alexander, Principal Consultant, **Regency IT Consulting**

OPENING ADDRESS

- 09.10 If you can spot it, you can stop it defending against the new norm
 - CISO's generally accept that by just doing the basics within recommended guidelines they can reduce risk. So why is it so difficult to achieve? We battle with budget and headcount restraints, incorrect perceptions of what security does, increasing and varying security frameworks, highly dynamic operating environments, and sometimes we just don't talk the money making language enough, that's a skill in itself and another story
 - Investing in better visibility and an understanding of what and how attacks seek to achieve their aim is one element of a security program that should carry weight. After all - what do we mean by a breach? A corporate machine breached with a first stage attack but which can be seen, means: it can be tracked; it can be investigated; it can be stopped; the vulnerability can be identified; and it can be concluded if and what type of data was lost. So what are the barriers to being more transparent - share price?

Spencer Summons, Head of Information Assurance and IS Governance, Tullow Oil

09.50 Being (in)secure by choice, not by chance

- How do you protect an Industrial Control System (ICS) in an effective manner?
- Cyber Security is not about adding firewalls and antivirus software, it takes a lot more to be and to stay
- protected. But how do you determine what is appropriate for your plant? Different industries require different levels of security
- What is the difference and how can we express this in concrete security measures?
- Risk based security management provides you with a sustainable method to achieve a protected ICS in an effective manner that improves safety, security, reliability
 - Sinclair Koelemij, Technical Lead IITS EMEA, **Honeywell Process Solutions**

10.30 Morning Coffee

- 11.00 Session reserved for sponsor
- 11.40 Securing the unsecured with eyes wide open
 - A holistic approach to achieve cyber security. Introduction to the world of cyber security technologies. What are the various technologies and how they help
 - SUD • What should be the approach for using the various technologies? What to use when and how
 - What should be the Key focus: People or Process or Technology? How to prioritize while making sure all three progress together
 - Creating a security roadmap for long term security Gomeet Pant, Information Security Manager, Cairn India

12.10 Adventures in cyber threat intelligence

- The security technology community has been evolving threat intelligence capabilities in an attempt to understand more about the groups and organisations that pose a threat to businesses, with a particular focus on the tools, tactics, techniques and procedures
 - employed by threat actors.

SHADOWS

DIGITAL

- The monitoring of open and closed sources plays an important role in identifying these threats and providing current situational awareness to security departments.
- This session will explore how this industry is evolving new threat intelligence techniques to maintain a current picture that helps defend organisations. Alastair Paterson, CEO, Digital Shadows

12.50 Networking lunch- Sponsorship opportunities available

13.50 Defending Networks through Simulation

- Do you know what a cyber-attack looks like? Can you defend your networks against all types of attacks?
- DEM
 - Do your vendor tools really protect you? • The best way to test your controls, staff, procedure's and strategies

Nuri Fattah, Director, Defence Corp

14.20 Network Monitoring and Situational Awareness for **Operational Technology in Oil & Gas**

- Brief overview of the current approaches, and their shortcomings
- A new non-intrusive approach for detecting misuses, operational mistakes, erroneous configurations and 0-day cyber attacks
- Use cases
- Future advances we are currently working on Damiano Bolzoni, COO, SecurityMatters

15.00 Afternoon Tea

15.30 Corporate Insider Threat Detection

- The insider-threat problem is one that can cause devastating impact to normal business operations, whether this be theft of intellectual property, sabotage of systems, or fraudulent use of company data
- The CITD project combines the many facets of insider threat, including the human-behavioural aspects, the detection architecture required to identify insider threat, and the analytical approaches that support detection
- In this talk, we shall examine the insider threat problem, discussing the types of threat that may occur, and how these threats could potentially be recognised through detection systems
- We shall present our proposed approach that incorporates behavioural-based anomaly detection, machine learning, and visual analytics, to facilitate effective detection, and possible prevention, of dangerous insider threats

Phil Legg, Research Associate, Cyber Security Centre, Department of Computer Science, University of Oxford

- 16.10 Cyber Exercises: A pragmatic approach to resiliency
 - Combating cyber threats is a shared responsibility
 - The critical role of Private Sector in this fight
 - Practicing government and private sector collaboration
 - Increased interdependence among diverse groups calls for educating all participants Gianluca D'Antonio, Chief Information Security Officer, Information Security & IT Risk Management, FCC Citizen Services
- 16.50 Chairman's Closing Remarks and Close of Day Two David Alexander, Principal Consultant, **Regency IT Consulting**











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4Secure have expert knowledge of designing, deploying and maintaining highly secure end-to-end systems that ensure safe creation, transmission and storage of sensitive or critical data. 4Secure are Owl Computing's European sales and support partner and will be demonstrating Owl's excellent perimeter defence data diode solution, a tried, tested, deployed and working next-gen cyber security solution. This patented hardware allows secure data sharing between networks with differing classifications whilst ensuring security through hardware enforced one-way data transfer. Our solution is compatible with a range of historians and process control systems used widely in critical infrastructure including; Osi Soft Pi systems, InStep eDNA, Scientech R*Time and Rockwell Automation. We have a range of one-way data diodes that include entry level low cost solutions that meet and exceed compliance guidelines. www.4-secure.com

Applied Risk is leader in Industrial Automation and Process Control security and specializes in ICS/SCADA security assessment, network security architecture, security training and ICS threat intelligence. Through our extensive ICS/SCADA security capabilities serving numerous major clients, including many of the top utilities in the world and some of the largest global companies in industry verticals including power generators, electricity transmission provider, water utilities, petro chemical plants and oil refineries. We help businesses protect asset and reduce security risk against emergent threat. We give organizations ranging from Fortune 500 enterprises to small- and medium-sized businesses the services and solutions they need to transform the way they procure, build, integrate and manage their critical infrastructures. www.applied-risk.com

Digital Shadows is a cyber-intelligence company that protects organisations from data loss and targeted cyber-attack. By applying our award-winning blend of expertise and technology we enable organisations to exploit social, cloud and mobile technologies while keeping their security and reputations intact. Our managed services monitor millions of data sources across the visible and dark web to deliver focussed, relevant intelligence about the risks you need to mitigate. **www.digitalshadows.com**

The Fox DataDiode serves to protect the integrity and availability of assets in an Industrial Control Systems (ICS) network. It provides a unique hardware-based, one-way data link that has been approved and certified by a large number of authorities. This allows you to enjoy the benefits of business integration by being able to send production data from an ICS network to an enterprise environment, while preventing all cyber-attacks directed at your industrial assets. www.fox-it.com

Honeywell offers a systemic approach to help mitigate the risks of the evolving cyber threat landscape. We offer a complete portfolio of services and tools that employ best practices in process control and cyber security. Honeywell global experts help users develop a security scheme to preserve key assets and ensure data availability, integrity and confidentiality. Honeywell delivers a more predictable and secure environment, regardless of control system vendor. www.honeywellprocess.com

Ixia provides cyber security test solutions covering wired, Wi-Fi, 3G/LTE equipment and networks for the Oil & Gas industry. Ixia will showcase the BreakingPoint PerfectStorm which recreates cyber-attacks in a controlled environment to battle-test IT infrastructures. It enables the testing of firewalls, device evaluation, IPS testing, DDoS mitigation, network security testing and more. www.ixiacom.com

Waterfall Security Solutions Ltd. is the leading provider of stronger-than-firewalls protections for industrial control networks and critical infrastructures. The company's products are deployed in utilities and critical national infrastructures throughout North America, Europe, Asia and Israel. Waterfall's technologies reduce the cost and complexity of compliance with NERC-CIP, NRC, NIST, CFATS and other regulations, and include support for leading industrial applications: Frost & Sullivan describe Waterfall's solutions as ensuring "optimum security for networks across user verticals" and awarded Waterfall the 2012 Network Security Award for Industrial Control Systems Entrepreneurial Company of the Year and the 2013 North America Award for Customer Value Enhancement. www.waterfall-security.com

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A: Network Monitoring and Situational Awareness for Oil & Gas OT Infrastructure

Overview of workshop

This workshop will present solutions currently available for network monitoring and situational awareness in Oil&Gas OT infrastructure. We will analyse what are the major strengths and weaknesses of each approach, when it can be used and what is the output users can expect. We will wrap up the session discussing the DENSEK project (www.densek.eu), a EU-sponsored research project that aims at building an open-source situational awareness platform for OT networks.

Benefits of attending

Gain insight about network monitoring and situational awareness for Oil&Gas OT networks, learn about different approaches, when and how to use them. Learn about European-drive initiatives to improve resilience of Critical Infrastructure.

Time table

- 08.30 Registration
- 09.00 Introduction
- 09.10 Current solutions for network monitoring and situational awareness of critical networks
- 10.30 Coffee Break
- 11.00 Pro's and con's of each approach
- 11.40 DENSEK Situational Awareness platform
- 12.20 Closing remarks
- 12.30 End of workshop

About the workshop host:



Dr Damiano Bolzoni (1981) received his PhD in 2009 from the University of Twente, where he performed research on anomaly-based intrusion detection. Since 2008 he has been involved in securing computer networks of critical infrastructure.

Before joining the University of Twente, he has been working for the Italian branch of KPMG, within the Information Risk Management division. Since 2009 he holds the position of Chief Operating Officer at SecurityMatters BV.



About SecurityMatters

SecurityMatters is a spin-off from the Dutch Technical Universities of Twente and Eindhoven. Our research and development team participates in many different projects throughout the EU and USA and delivers cutting-edge network monitoring and intrusion detection technology to make its customers more secure and in control. SecurityMatters technology is the result of more than 20 years of research and field experience.

B: Cyber Security Incident Handling for Oil & Gas

Overview of workshop

Cyber security incidents pose unique risks in oil and gas operations with possible disastrous environmental consequences. This workshop will highlight the relationship between cyber security incidents and the environment, discuss state of the art incident handling, and why these existing approaches fail to address the unique needs of Oil and Gas, as well as discuss the need for a collaborative incident handling strategy to efficiently respond to cyber-attacks against Oil and Gas installations.

Benefits of attending

The workshop will give the participants insight into existing approaches for incident response, explain why these do not meet the unique needs for efficiently handling incidents for Oil and Gas installations and operations. The workshop will focus on the need for a collaborative incident handling strategy and why this is an essential part of cyber security protection.

Time table

- 13.00 Registration
- 13.30 Introduction
- 13.40 Incident Response An Overview
- 14.20 Efficient Incident Response Needs
- 15.00 Coffee Break
- 15.30 Collaborative Incident Handling
- 16.10 Case Study Walk-Through
- 16.50 Closing remarks
- 17.00 End of workshop



About the workshop host:

Dr. Siv Hilde Houmb is the CEO, CTO, and "White Hat Hacker" for Secure-NOK. She received her Ph.D. from the University of Science and Technology (NTNU), Trondheim, Norway in 2007, with her dissertation work on decision support methodologies and techniques to choose among sets of security solutions for critical information systems.

Previously, Dr. Houmb worked as a security specialist and risk analyst in Telenor from 1999-2011, was a guest researcher at Colorado State University (US) from 2004-2006, and held a post-doctoral at the University of Twente (the Netherlands) from 2007 to 2008. Dr. Houmb has served as a preferred security specialist for the European Telecommunication Standards Institute (ETSI) and the European Commission on topics such as RFID, car-to-car communications, privacy impact assessments, risk assessment and security evaluations for new and emerging ICT technologies, such as Next Generation Networks and Network Services.

About Secure-NOK AS

Secure-NOK AS is a cyber-security company focusing on securing industrial control systems, specifically



SCADA systems for drilling controls, drilling equipment and systems, and SCADA systems for the pipeline industry and refineries. Secure-NOK AS was established in February 2010 and has offices in Houston, Texas; and Stavanger and Hamar, Norway.

Evening Drinks Reception - Hosted by

British Ambassador's Residence I Oslo



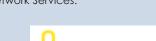


SMI Group along with UK Trade & Investment, Oslo invites you to join them for a drinks reception at The British Ambassador's residence on the evening of the first day of the conference. This event will give delegates further opportunity to network with industry professionals in a relaxing environment. Delegates will leave Oil and Gas Cyber Security 2014 having forged new relationships and renewed existing ones.

The British Ambassador's residence in Oslo is one of Britain's 'historic residences' abroad, bought by the British government in 1906. Successive Ambassadors have been proud to live and work at 'Villa Frognæs' and to welcome all their guests to this unique legacy of Norwegian –British heritage. We look forward to seeing you there.



Credit: JCP, photographer - Johnny Vaet Nordskog



OIL AND GAS CYBER SECURITY

Conference: Tuesday 3rd & Wednesday 4th June 2014 | Quality Hotel 33, Økern | Oslo, Norway Workshops: Thursday 5th June 2014

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