

Soggetto coordinatore	ENEA Unita' Tecnica di Modellistica Energetica ed Ambientale
Titolo del progetto	Cybersecurity on SCADA: risk prediction, analysis and reaction tools for Critical Infrastructures
Acronimo	CockpitCI
Descrizione del progetto	<p>The CockpitCI project aims on one hand to continue the work done in MICIE by refining and updating the on-line Risk Predictor deployed in the SCADA centre, on the other hand to provide some kind of intelligence to field equipment, allowing them to perform local decisions in order to self-identify and self-react to abnormal situations induced by cyber attacks. It is mandatory to operate both at SCADA control centre and at field equipment because it is very dangerous to let field components operate autonomously.</p> <p>To address this issue an hybrid validation system will be implemented: at the Control Centre level an "Integrated On-line Risk Predictor" will provide the operator with qualitative/quantitative measurements of near future level of risk integrating data coming from the field, from other infrastructures, and from smart detection agents monitoring possible cyber attacks; at field level, the system is complemented with a smart software layer for field equipment and a detection system for the TLC network.</p>
TA/SG	TA 2?
Riferimento Bando	FP7 SEC-2011.2.5-1 Cyber attacks against critical infrastructures – Capability Project
Valore del progetto	€ 4.234.558,00
Pubblicazioni	<p>E. Ciancamerla, M. Minichino, S. Palmieri - On prediction of QoS of SCADA accounting cyber attacks - Probabilistic Safety Assessment and Management Conference (PSAM11) and the Annual European Safety and Reliability Conference (ESREL 2012) - Helsinki, Finland - 25-29 June 2012</p> <p>A. Bobbio, A. Bonaventura, E. Ciancamerla, D. Lefevre, M. Minichino, R. Terruggia - Temporal network reliability in perturbed scenarios: Application to a SCADA system. In Proceedings IEEE Annual Reliability and Maintainability Symposium, pages 1–7, Reno, NV, 2012.</p> <p>A. De Nicola, G. Vicoli, M. L Villani - A Rule-based Approach for Modeling Behaviour in Crisis and Emergency Scenarios Enterprise Interoperability V Raul Poler, Guy Doumeingts, Bernhard Katzy and Ricardo Chalmeta Springer, 2012</p>

E. Ciancamerla, M. Minichino, V. Rosato, G. Vicoli - SCADA systems within CI interdependency analysis: cyberattacks, resilience and quality of service - *Workshop on Experimental Platforms for Interoperable Public Safety Communications* - Joint Research Centre (JRC) – 10, 11 October 2011- Ispra - Italy

E. Ciancamerla, D. Lefevre, M. Minichino - Service dependability and performance of SCADA systems interconnecting Power grids and Telco networks - ESREL 2011 Annual Conference of the European Safety and Reliability Association (ESRA) - Troyes, France - 18 - 22 September 2011 – ISBN 978-0-415-68379-1 (Hbk) – ISBN 978-0-203-13510-5 (eBook)

A. Bobbio, E. Ciancamerla, M. Minichino, R. Terruggia - Reliability Analysis of Multi-source Multi-sink Critical Interacting Systems - 3rd International Workshop on Dependable Control of Discrete Systems (DCDS) - Saarbrücken, Germany - Jun. 15-17, 2011

A. De Nicola, A. Tofani, G. Vicoli, M. L. Villani - Modeling Collaboration for Crisis and Emergency Management - The First International Conference on Advanced Collaborative Networks, Systems and Applications - COLLA 2011 Luxembourg June 19-24, 2011 isbn:978-1-61208-008-6

E. Ciancamerla, M. Minichino, V. Rosato, G. Vicoli - SCADA systems within CI interdependency analysis: cyberattacks, resilience and quality of service Workshop on Experimental Platforms for Interoperable Public Safety Communications Joint Research Centre (JRC) - Ispra - Italy 10, 11 October 2011

A. Bobbio, G. Bonanni , E. Ciancamerla, R. Clemente, A. Iacomini, M. Minichino, A. Scarlatti, R. Terruggia, E. Zendri - Unavailability of critical SCADA communication links interconnecting a power grid and a Telco network - Reliability Engineering and System Safety Journal – Elsevier editor , Vol 95, ISS.12, December 2010

P. Capodiecì, M. Minichino, S. Panzieri, M. Castrucci, A. Neri, L. Lev, P. Simões - MICIE: An Alerting Framework for Interdependent Critical Infrastructures - ICT 2010 Conference, Brussels Expo 27-29 September 2010

E. Ciancamerla, C. Foglietta, D. Lefevre, M. Minichino, L. Lev and Y. Shneck - Discrete event simulation of QoS of a SCADA system interconnecting a Power grid and a Telco network - 1st IFIP TC11 International Conference on Critical Information Infrastructure Protection 2010 World Computer Congress 2010 proceedings - Springer - Brisbane 2010 – ISSN 1868-4238

E. Ciancamerla, S. Di Blasi, C. Foglietta, D. Lefevre, M. Minichino, L. Lev and Y. Shneck - QoS of a SCADA system versus QoS of a Power distribution grid - 10th International Probabilistic Safety Assessment & Management (PSAM) Conference PSAM 10 - Seattle, WA June 7-11, 2010

E. Marchei, V. Fioriti, S. Ruzzante, E. Castorini, V. Rosato, 2010 Stability of a model of power microgeneration network using the Kuramoto model

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Curriculum	Michele Minichino