

# Dr. Ulrich Lang

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# Addendum to Resume: Expert Publications

### 1.1 Main Author and presenter

#### 1.1.1 Scientific publications and other published articles papers

- Least Privilege: What it Really Means When it is Done Right, What is Done Today, and What Can be Done, ISSA Journal, July 2012.
- Manageable Smart Grid Security Policy Automation, ISSA Journal, April 2012
- Enabling and Shortening Information Assurance Accreditation for SOA & Cloud at the IFSEC SINET 2012 Conference, 18 March 2012, and published a matching technical whitepaper (self-published, with Promia, Inc).
- Security Policy Automation for Smart Grids: Manageable Security & Compliance at Large Scale in the Proceedings, ISSE Conference 2011, Prague, Czech Republic, Nov. 2011.
- Analysis of Recommended Cloud Security Controls to Validate OpenPMF "Policy as a Service", Information Security Technical Report, Oct. 2011
- Model-Driven Cloud Security Employ Cloud Application Security Policy Automation to Make Cloud Security Better, IBM DeveloperWorks, Feb. 2011.
- Authorization as a Service for Cloud & SOA Applications at the International Workshop on Cloud Privacy, Security, Risk & Trust (CPSRT 2010), Collocated with 2nd IEEE International Conference

- on Cloud Computing Technology and Science (Cloudcom) CPSRT 2010, Indianapolis, Indiana, USA, December 2010
- Policy Automation: Improve Cloud Application Security ROI in the Information Systems Security Association (ISSA) Journal, Featured Article, October 2010
- Cloud & SOA Application Security as a Service at ISSE 2010, 5-7 October 2010, Berlin, Germany.
- Security Policy Automation: Improve Cloud Application Security ROI, Cloud Security Alliance discussion board (later published in the October 2010 ISSA Journal, see above)
- Model Driven Security Accreditation (MDSA) For Agile, Interconnected IT Landscapes at The 1st ACM Workshop on Information Security Governance, November 13, 2009, Hyatt Regency Chicago, Chicago, USA
- Vision for Building Secure, Accredited Future Military Software Applications to the Center for Advanced Defense Studies, Washington, DC, USA (Note: not publicly available)
- SOA Security Concerns for the UK Cyber Security KTN, London, UK, 03 Nov 2008 (available for purchase)
- Managing business compliance using model-driven security management, in Pohlmann N.,
   Reimer H., Scheiner W. (editors), Proceedings ISSE 2008 Securing Electronic Business Processes
   Highlights of the Information Security Solutions Europe 2008 Conference, Vieweg + Teubner,
   ISBN 978-3-83480660-4, Edition 2009, also presented at ISSE 2008, Madrid, Spain, 09 Oct 2008
- Model Driven Security Management: Making Security Management Manageable in Complex Distributed Systems at MODSEC 2008 (Modeling Security Workshop) CEUR Workshop Proceedings, Tolouse, France, 28 Sept 2008
- Model Driven Security helps simplify IT security management in the ICT TechNews newsletter April 2008
- Model Driven Security (MDS) management and enforcement to support SOA-style agility at the Information Security Solutions Europe (ISSE) conference, Warsaw, Poland, 26 September 2007
- Secure integration of existing ATM systems in Jane's Airport Review, in the October 2006 issue. The article describes the benefits of secure IT integration for ATM.
- Generating High Assurance Security Policies with Model Transformations at the 2nd
   International Workshop on Aspect-Based and Model-Based Separation of Concerns in Software
   Systems (ABMB 2006), 10-12 July 2006, Bilbao, Spain (with Fraunhofer FOKUS)
- Simplifying Security in Complex IT Environments in the September issue of Information Security Bulletin
- Integrating Security Policies via Container Portable Interceptors in IEEE Distributed Systems
  Online, vol. 7, no. 7, 2006, art. no. 0607-07001. The paper was invited after the Best Paper
  Award at the ARM2005 workshop. (with Fraunhofer FOKUS)
- Integrated Security for Air Traffic Management IT Systems. This paper explains how to achieve secure integration and administration of the IT systems involved in air traffic management using ObjectSecurity's OpenPMF (self-published)
- Integrating Security Policies via Container Portable Interceptors (with Fraunhofer FOKUS), at the ACM/IFIP/USENIX 6th International Middleware Conference, and the 4th Workshop on Adaptive and Reflective Middleware (ARM05), November 28th December 2nd, 2005, Europole Congress

- Center, Grenoble, France. We received the Best Paper Award and an invitation to publish a new version in IEEE Distributed Systems Online (see above).
- Information Security in Command & Control for Defense and Homeland Security. This paper
  explains how to achieve secure shared situational awareness and distributed collaborative
  working using ObjectSecurity's OpenPMF (self-published)
- Integrated IT Security: Air-Traffic Management Case Study at the at the ISSE Conference in Budapest, Hungary, 26.-28.09.2005.
- OpenPMF: Integrated Security Policy Management at the at the CALIBRE/RMLL2005 Open Source Conference in Dijon, France, 5.-9.07.2005
- OpenPMF Security Policy Framework for Distributed Systems at the Information Security Solutions Europe (ISSE 2004) Conference, Berlin, Germany
- A Flexible, Model-Driven Security Framework for Distributed Systems: Policy Management Framework (PMF) at The IASTED International Conference on Communication, Network, and Information Security (CNIS 2003) in New York, USA. December 10-12, 2003
- Access Policies for Middleware, PhD Dissertation, University of Cambridge Computer Laboratory, March 2003
- SimpleGIS: Platform for Location Based Services, at Eurescom 2002 Summit in Heidelberg October 21-24, 2002.
- Developing Secure Distributed Systems with CORBA, book, published with Artech House, March 2002, Dr. Lang main author, Mr Schreiner co-author.
- Verifiable Identifiers in Middleware Security at ACSAC (Annual Computer Security Application Conference) - co-authored by Ulrich Lang, Rudolf Schreiner, and Dieter Gollmann (Microsoft Research).
- Cryptography and Middleware Security to ICICS2001 (Third International Conference on Information and Communications Security). It was presented by Ulrich Lang in Xi'an, China. It has also been published in Springer Lecture Notes in Computer Science (LNCS) 2229 (11/2001). (by Ulrich Lang and Rudolf Schreiner, and Dieter Gollmann, Microsoft Research), November 2001
- CORBA as a Secure Platform for Mobile Applications, joint paper presented by Rudolf Schreiner at EURESCOM 3G Technologies and Applications 2001. Oct 2001
- *MICOSec: An Open Source Implementation of the CORBA Security Services*, which was presented at ISSE 2001 (Information Security Solutions Europe Conference), September 2001
- Eine Open-Source Implementierung der CORBA Sicherheitsdienste (An OpenSource implementation of the CORBA Security Services), joint paper was presented at the 7. Deutscher IT-Sicherheitskongress (7. German IT Security Conference) by Rudolf Schreiner. May 2001
- The Challenges of CORBA Security, presented at workshop "Sicherheit in Mediendaten" and published with Springer, June 2000
- Flexibility and Interoperability in CORBA Security in 'Electronic Notes in Theoretical Computer Science' (Elsevier). February 2000
- CORBA Security on the Web was published in Future Generation Computer Systems, Special Issue: Security on the Web (Elsevier). August '99

- General overview of CORBA security which was published in the German computer magazine "iX" in October 1998: "Schutz und Trutz - Sicherheit in CORBA-Systemen" (Rudolf Schreiner & Ulrich Lang).
- Secure CORBA based Electronic Commerce Systems which was published in the Elsevier/Zergo Information Security Technical Report, Vol. 3, No 2. July 1998
- *CORBA Security*, Master's Degree dissertation (with distinction), September 1997, M.Sc. in Information Security at Royal Holloway, University of London

#### 1.1.2 Presentation Slide Author and Presenter

- CSA Identity & Access Management Guidance & Identity Roadmap at the Cloud Security Alliance Silicon Valley Chapter Meeting, Santa Clara, CA, USA, 09 October 2012.
- CSA Identity & Access Management Guidance & Identity Roadmap at the Cloud Identity Summit,
   Vail, CO, USA, 16-20 Juy 2012.
- Enabling and Shortening Government Information Assurance Accreditation for SOA & Cloud at the ISSA Cornerstones of Trust Conference, 06 June 2012
- Least Privilege: What it Really Means When it is Done Right, What is Done Today, and What Can be Done at the ISSA Cornerstones of Trust Conference, 06 June 2012
- Cloud Application Security Policy Automation at the Cloud Security Meetup Group, San Francisco, 11 Jan 2012
- Ensuring Information Security and Compliance when Moving into the Cloud, Short course at BioITWorld Health Cloud Computing Conference, 18 September 2011
- Cyber security paradigm shift needed: Focus on solving problems instead of "something else" at the ISSA Cornerstones of Trust Conference, Foster City, CA, USA, 01 June 2011
- OpenPMF™ Making Smart Grid Security Manageable Through Automation at Plug & Play SmartGrid Expo, 14 April 2011
- Cloud Application Security Policy Automation at Cloud Security Alliance, Silicon Valley Chapter, 08 February 2011
- Cloud & SOA Security Policy Automation at the ISSA/Security Network Collaboration Summit 2010, 09 March 2010, San Diego, CA, USA
- ObjectSecurity's Vision for Cloud & SOA Security Policy Automation at PACT 2010, 25 Mach 2010, Sunnyvale, CA, USA
- ObjectSecurity's vision for Cloud & SOA Security Policy Automation at the SVB Showcase 2010, 23
   Mach 2010, Palo Alto, CA, USA
- Vision for Agile Policy Management & Agile Accreditation Automation at the ISSA / SecurityNetwork / SPAWAR Information Assurance Collaboration Workshop, 19 November 2009, San Diego, CA, USA
- Application & Workflow Policy Automation OpenPMF and Model Driven Security at the ISSA Cornerstones of Trust 2009 Conference, Foster City, CA, USA, 14 October 2009
- Application & Workflow Policy Automation OpenPMF and Model Driven Security at the Global Security Challenge Regional Finals America West, where ObjectSecurity is shortlisted top 3 most promising security startup, Palo Alto, CA, USA, 29 September 2009

- Application & Workflow Policy Automation OpenPMF and Model Driven Security at a "lightning round" panel discussion at the Burton Group Catalyst Conference, San Diego, CA, USA, 28-31 July 2009
- Making Regulatory Compliance Happpen for Service Oriented Architecture (SOA) in Healthcare at the OMG SOA in Healthcare Conference, Chicago, IL, USA, 02-04 June 2009
- SOA security concerns closing the loop between business and IT information assurance at the DISA/Navy SPAWAR US Cyber Security Collaboration Summit, San Diego, CA, USA, 20 Nov 2008
- Aligning Business Compliance and IT Security at the RSA Security Conference, London, UK, 28 Oct 2008
- Integration of Security into Enterprise Architecture Frameworks Practical Experiences at the Open Group Conference, Munich, Germany, 20 Oct 2008
- Aligning Business Compliance and IT Enforcement at the Business Service Management (BSM)
   Forum, Cologne, Germany, 15 Oct 2008
- Aligning business and IT: Model-Driven, Cross-Platform Secure Information Sharing for Distributed Synthetic Environments at the NATO Workshop on Development and Use of Computer Generated Forces Technologies, 03 Sept 2008
- Model-driven security management at the OMG Technical Meeting, Ottawa, Canada, 23 June 2008.
- Rapid Model-driven Simulation/Prototyping/Testing of Secure Information Sharing in Distributed Systems at the ITEC Conference 2008, Stockholm, Sweden, 10-12 June 2008.
- Airport operations optimisation through agile, secure IT integration (with Eamonn Cheverton, Enterprise Architect, BAA) at the Airport IT conference (Berlin ILA), Berlin, Germany, 28-29 May 2008
- Two peer-to-peer sessions "How can we secure SOA without losing agility?" at the RSA Conference 2008, San Francisco, CA, USA, 7-11 April 2008. Contact us to arrange a meeting. Abstract: In this Ask the Moderator session, ObjectSecurity discusses how SOA security must go beyond web services security. The core issue is how to specify and maintain consistent/effective security policies for \*agile\* SOA. This cannot be done manually (too complex/labor-intensive). New approaches such as Model Driven Security are needed. Session topics incl. security stovepiping, how to reduce cost/effort, architecture approaches, experiences, secure BPM SOA." (P2P-205A, 9 Apr 2008, 1:40 PM 2:30 PM, and repeat session April 9 at 5:40pm 6:30pm).
- The SOA Security Hurdle (with Intel) at the RSA Conference Executive Briefing Center, San Francisco, CA, USA, 7-11 April 2008.
- OpenPMF™ 2.0 Model Driven Security at the Libraryhouse Innovation & Growth Forum 2008, London, UK, 17 March 2008
- Workshop session "OMG standards for Model Driven Security How can we secure SOA without losing agility?" on Thursday 13 March 2008 at the Software Assurance group (SwA) at the OMG technical meeting, Washington DC, USA, 10-14 March 2008. A related presentation "A Model Driven Security approach for SOA" will also be presented on Tuesday 11 March 2008 at the SOA group. Abstract: ObjectSecurity discusses the need for OMG standards for Model Driven Security, and how SOA security must go beyond web services security. The core issue is how to

- specify and maintain consistent/effective security policies for \*agile\* SOA. This cannot be done manually (too complex/labor-intensive). New approaches such as Model Driven Security are needed. Session topics incl. security stove-piping, how to reduce cost/effort, architecture approaches, experiences, secure BPM SOA."
- SME showcase "OpenPMF 2.0 and Model Driven Security" at the Exploring Breakthrough Security Technologies event in London, UK, 13 February 2008. Contact us to arrange a meeting.
- Workshop session "OMG standards for Model Driven Security How can we secure SOA without losing agility?" on Thursday 13 March 2008 at the Software Assurance group (SwA) at the OMG technical meeting, Washington DC, USA, 10-14 March 2008. A related presentation "A Model Driven Security approach for SOA" will also be presented on Tuesday 11 March 2008 at the SOA group. Abstract: ObjectSecurity discusses the need for OMG standards for Model Driven Security, and how SOA security must go beyond web services security. The core issue is how to specify and maintain consistent/effective security policies for \*agile\* SOA. This cannot be done manually (too complex/labor-intensive). New approaches such as Model Driven Security are needed. Session topics incl. security stove-piping, how to reduce cost/effort, architecture approaches, experiences, secure BPM SOA."
- Secure information sharing and effective security management for ATM at the UK ATM-KN
   Industry Showcase Event at the British Airports Group Offices, London, 08 November 2007
- Rapid prototyping, simulation, testing of secure information sharing in distributed systems at the 5th Annual Simulation & Synthetic Environments Symposium, London, 06 November 2007
- Rapid prototyping, simulation, testing of secure information sharing in distributed systems at the QinetiQ Synthetic Air Traffic Environment event, Farnborough, 29 October 2007
- Simplifying security management of cross-organisation collaborative decision making at ECIW 2007: The 6th European Conference on Information Warfare and Security Defence College of Management and Technology, 2-3 July 2007, Shrivenham, UK
- Simplifying security management using model driven security: SecureMDA™, OpenPMF™, TrustedSOA™ (bmi/07-06-10) at the OMG Technical Meeting, 28 June 2007, Brussels, Belgium
- Simplifying security policies by using model-driven engineering at Code Generation 22007, 18-20 May 2007, Cambridge, UK.
- Model Driven Development of Security Aspects at the Electronic Notes in Theoretical Computer Science Volume 163, Issue 2, 16 April 2007, Pages 65-79 Proceedings of the Second International Workshop on Aspect-Based and Model-Based Separation of Concerns in Software Systems (ABMB 2006). (with T. Ritter/J. Reznik from Fraunhofer FOKUS)
- The need for a standard secure information sharing infrastructure for airport terminals at the 12th International Conference and Exhibition for Passenger Terminal Technology, Security, Design, Operations and Management, Barcelona, Spain, 27-29 March 2007.
- Automatic model-driven security policy generation for high assurance systems (with the US Naval Research Laboratory and Fraunhofer FOKUS) at the OMG Software Assurance Workshop, Washington D.C., 5.-9. March 2007.
- Simplifying security policies by using model-driven engineering at the RSA Security Conference, San Francisco, 5.-9. February 2007.

- DDS Security Architecture concepts for data distribution services at the OMG TC meeting in Washington D.C, 6 December 2006
- Modelling Security for Complex, Heterogeneous, Distributed IT Systems at the EU FET
  Consultation Workshop on "Communication Paradigms for 2020" at the European Commission,
  Brussels, Belgium, February 2004
- The CORBA Component Model and its new security framework: Policy Management Framework
   (PMF) at the OMG Security By Design Day in London, UK. November 18, 2003 (together with
   Rudolf Schreiner, Dr. Marc Born, Fraunhofer Fokus, and Dr. Ramesh Bharadwaj, US Naval
   Research Lab)
- A Flexible, Model-Driven Security Framework for Distributed Systems: Policy Management Framework (PMF) at the University of Cambridge Computer Laboratory in Cambridge, UK. November 4, 2003
- Ein flexibles, modell-basiertes Sicherheitsframework für verteilte Systeme (a flexible, modeldriven security framework for distributed systems): Policy Management Framework (PMF) at the Technical University Munich, Germany. July 2003
- A Flexible, Model-Driven Security Framework for Distributed Systems: Policy Management Framework (PMF) at The Ultimate Leading Edge International IT Conferences & Expos in Toronto, Canada. October 14-16, 2003
- COACH A Component Based Open Source Architecture for Distributed Telecom Applications at the OMG Technical Committee Meeting in Paris, France. May 2003
- Model Driven Security (Policy Management Framework PMF): Protection of Resources in Complex Distributed System at the DOCSec 2003 Workshop, April 2003
- Integrated Enterprise Security Policy at the Distributed Object and Components Security Workshop (DOCsec2002), Baltimore/USA. March 19, 2002. two hour tutorial
- Middleware Security Current Research and Future Work at the University of Cambridge Computer Laboratory. March 12, 2002
- MICOSec: CORBA Security Reality Check at the DOCsec2001 workshop in Annapolis, MD (USA).
   March 2001
- Three hour guest lecture on *Security in Distributed Systems* for the Computer Security (IS4) course in Information Security at Royal Holloway, University of London, covering 'What is CORBA?', 'Securing CORBA Applications', and 'The CORBASec Specification 'November 27, 2000
- Security Attributes in CORBA, seminar talk on the same topic at the University of Cambridge Computer Laboratory. November 7, 2000
- CORBA Security in a Telecommunications Environment at the DOCsec2000 workshop in Boston (MA), April, 2000,
- CORBA security, presentation for a large telecommunications provider, December 1999
- Three hour guest lecture on Security in Distributed Systems for the Computer Security (IS4) course in Information Security at Royal Holloway, University of London, covering 'What is CORBA?', 'CORBA Security Architecture', and 'CORBA in Practice', December 6, 1999,
- Why CORBA Security (Still) Fails at the DERA Security Workshop 1999, December 1, 1999,

- CORBA Security in a Large Banking Environment at the DOCsec'99 workshop in Baltimore, July 1999
- Distributed Access Control at DERA (Malvern). February 25, 1999,
- The Current State of CORBA Security Implementations at the DERA Security Workshop 1998. December 3, 1998
- Three hour guest lecture on *Security in Distributed Systems* for the Computer Security (IS4) course in Information Security at Royal Holloway, University of London, November 30, 1998
- CORBA, CORBA Security, and CORBA security in practice. Cambridge University Computer Laboratory, April 1998

## 1.2 Contributor, but not main author or presenter

#### 1.2.1 Papers/articles

- SOA & Cloud Application Information Assurance at the Classified Advanced Technology Update Short Course (CATU) at the Naval Postgraduate School, Monterey, California, USA, 11-14 June 2012 (presented by Promia, Dr. Lang paper/side contributor)
- Next Generation Requirements Engineering at the INCOSE Conference, Rome, Italy, 9-12 July 2012 The paper was awarded the "Best Paper" award. (with INTECS, presented by Rudolf Schreiner) (note: Dr. Lang is contributor, but not presenter)
- Real-time Support for Exercise Managers' Situation Assessment and Decision Making at the
  ISCRAM 2012 Conference, 22-25 April 2012 (Dr. Lang contributed to paper content, presented
  by Rudolf Schreiner, with Linköping University, Space Applications Solutions and VSL Systems)
  (note: Dr. Lang is contributor, but not presenter)
- Model Driven Security Accreditation of Agile Systems at the 11th International Common Criteria Conference & Exhibition, 21-23 September 2010, Antalya, Turkey (note: Dr. Lang is contributor, but not presenter)
- Safety, Security and Software Reuse: A Model-Based Approach with ikv++ and Intecs at RESAFE 2009, 4th Int Workshop in Software Reuse and Safety, Washington DC, 27 September 2009 (note: Dr. Lang is contributor, but not presenter)
- Next Generation Embedded Systems Requirement Engineering at the Embedded World 2012
  Conference, 29 Feb 2012, together with INTECS (J. Favaro) (note: Dr. Lang is contributor, but not presenter)
- Improving Requirements Engineering within the European Space Industry at the ERTS 2012 Conference, Wednesday 1 Feb 2012, together with INTECS (S. Mazzini/J. Favaro) and European Space Agency (H-P De Koning) (note: Dr. Lang is contributor, but not presenter)

#### 1.2.2 Presentation materials

 Model Driven Security, NEASCOG, NATO HQ, 24 September 2010, Brussels, Belgium. (note: contributor, but not presenter)

- Manageable IT integration and manageable security for integrated airports at Passenger Terminal Expo, Abu Dhabi, UAE, 18 Nov 2008 (Dr. Lang's materials presented by BAA)
- Secure Model Driven Information Exchange at the Future Security Symposium 2008, Karlsruhe, Germany, 10 September 2008. (joint materials presented by Dr. Lang's colleague Rudolf Schreiner)
- From Models to Secure Distributed Systems (with Fraunhofer FOKUS) at the 5th EUROCONTROL
  Innovative Research Workshop & Exhibition Workshop Parallel Events (Visualization and
  Distributed Systems Technologies, the AD4 approach and beyond), Bretigny sur Orge, France, 5
  December 2006 (joint materials presented by Dr. Lang's colleague Rudolf Schreiner)
- Building Secure and Interoperable ATC Systems (with Fraunhofer FOKUS) at the 5th EUROCONTROL Innovative Research Workshop & Exhibition - Workshop Parallel Events (Visualization and Distributed Systems Technologies, the AD4 approach and beyond), Bretigny sur Orge, France, 5 December 2006 (joint materials presented by Dr. Lang's colleague Rudolf Schreiner)
- Adaptive Middleware For Challenged Networks at the First International Workshop on Languages, Methods, and Tools for Model-driven Agile Development (MAD 2004), Naval Research Laboratory, Washington DC, USA Adaptive Middleware For Challenged Networks at the NATO Workshop 'Cross-Layer Issues in the Design of Tactical Mobile Ad Hoc Wireless Networks: Integration of Communication and Networking Functions to Support Optimal Information Management', US Naval Research Laboratory in Washington, DC (joint materials, presented by Rudolf Schreiner, and Marc Born & Tom Ritter, Fraunhofer FOKUS)
- OpenPMF Policy Management Framework Managing Security Policies in Large Distributed Systems at the OMG Technical Meeting in St. Louis, MO, USA. April 2004 (joint work presented by Rudolf Schreiner)
- Information Assurance and Access Control Requirements for Combat Management Systems at the OMG Technical Meeting in St. Louis, MO, USA. April 26-30 2004, (joint materials presented by Rudolf Schreiner and Dr. Ramesh Bharadwaj, US Naval Research Lab, Marc Born & Tom Ritter, Fraunhofer Fokus)
- Secure Middleware for Defence Applications at the OMG Technical Meeting in Anaheim, CA, USA, Feburary, 5, 2004 (joint materials presented by Rudolf Schreiner - together with Dr. Ramesh Bharadwaj, US Naval Research Lab, and Dr. Marc Born, Fraunhofer Fokus)
- Komponenten-basierte Anwendungsentwicklung auf OpenSource-Plattformen Die nächste Generation heterogener Middleware (component-based application development on open source platforms - the next generation of heterogeneous middleware) at the LinuxWorld Conference and Expo in Frankfurt, Germany, October 28, 2003 (joint materials presented by Rudolf Schreiner)
- Flexible CORBA Components for Mission-Critical Distributed Applications at the "Role of Middleware in Systems Functioning over Mobile Wireless Networks Workshop" (Task Group 12 of the NATO Research and Technology Organization's Information Science and Technology Panel; hosted by FGAN/FKIE), August 2003 (joint materials presented by Tom Ritter from Fraunhofer Fokus and Rudolf Schreiner)

•	Tutorial on middleware security at the Middleware 2001 conference in Heidelberg, Germany, November 2001 (joint materials presented by Rudolf Schreiner)