

## SKILL PROFILE

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## RECOMMENDATIONS

*"Thomas is known as an ambitious contributor to the quality of our products; ... he has achieved product improvements with respect to functional, architectural, performance, and user experience issues."*

*"... he was always self-motivated to apply his analytical skills and deliver intelligent solutions. He also proved innovative in architectural and design proposals ..."*

*"... Thomas proved his skills in mediating project issues in an international team setup ..."*

## POSITIONS

since 2019:	<b>Core Solution Architect</b> with Nokia <ul style="list-style-type: none"><li>• <b>pre-sales support</b></li><li>• product presentation and training</li></ul>
since 2016:	<b>Solution Architect</b> with Nokia Networks <ul style="list-style-type: none"><li>• <b>subscriber data management cloud solutions</b></li><li>• <b>subscriber data management customer features</b></li><li>• <b>5G network architecture</b></li></ul>
since 2013:	<b>System Architect</b> with Nokia Solutions and Networks <ul style="list-style-type: none"><li>• <b>subscriber data management</b></li><li>• <b>IMS features, mobility management, protocols</b></li></ul>
since 2011:	<b>Product Architect</b> with Nokia Siemens Networks <ul style="list-style-type: none"><li>• <b>quality management:</b> introduction of quality standard TL9000</li><li>• analysis IMS SIP <b>charging</b> application server</li></ul>
since 2007:	<b>System Architect</b> with Nokia Siemens Networks <ul style="list-style-type: none"><li>• <b>architecture / systems engineering for application services</b></li><li>• consulting for <b>product management</b>, Scrum master</li><li>• responsibility for the <b>user interface design</b> guide and <b>usability</b></li><li>• <b>standardisation</b> activities: contributions to Open Mobile Alliance</li><li>• <b>leading</b> design teams for functional specification</li><li>• systems engineering for a mobile client application</li><li>• <b>architecture</b> and <b>interactive design</b> for mobile <b>client</b> applications</li><li>• <b>usability process:</b> development, responsibility, deployment</li></ul>
since 2002:	<b>Systems Engineer</b> with Siemens Mobile Networks / Mobile Solutions <ul style="list-style-type: none"><li>• <b>architecture</b> for <b>application server</b> and <b>platform</b> projects</li><li>• <b>leading design teams</b> • <b>requirements engineering</b></li><li>• assessment and negotiation of <b>effort estimations</b></li><li>• <b>leading task forces</b> (performance analyses; GUI integration)</li><li>• responsibility for GUI issues (design guide, usability, templates)</li><li>• <b>training concept</b> planning for a new development location</li></ul>

since 1996:	<b>System Developer</b> with Siemens Public/Intelligent Networks <ul style="list-style-type: none"> <li>• evaluation of OEM hardware, <b>protocols</b></li> <li>• <b>evaluation</b> of DB and web <b>technologies</b> • internationalisation</li> <li>• <b>coaching</b> cooperation partners • supervision <b>outsourcing</b></li> <li>• <b>specifications, service concepts</b> and <b>data models</b></li> <li>• user interface design guide; software design guide</li> <li>• design and <b>development</b> of <b>server</b> and <b>DB components</b></li> </ul>
May 1995 – Oct. 1995:	Software Developer with a small software company @ Lübeck
Jan. 1989 – March 1995:	<b>Research Assistant</b> at Freie Universität Berlin, department for software engineering and distributed systems
Nov. 1987 – Dec. 1988:	Scientific Employee at the research institute of the society for mathematics and data processing (now Fraunhofer) at the Technical University of Berlin (ESPRIT research project about <b>distributed systems</b> )
during studies:	various <b>Teaching Assistant</b> positions, mainly in the computer science department giving tutorial or practical courses
Jan. – March 1979:	Programmer internship, computer department of a district savings bank

## TRAINING, CERTIFICATES AND FURTHER ACHIEVEMENTS

2015/2018	• Cygwin Gold Star Awards
Sep./Oct. 2012	• In-Memory <b>Data Management</b> . HPI
Sep./Oct. 2012	• Functional Programming Principles in <b>Scala</b> . Martin Odersky
Nov. 2011	• <b>Project Management</b> Advanced. HTW Berlin
Feb./Mar. 2011	• Quality Management. TÜV SÜD Akademie • Examined <b>Quality Management Representative</b> QMR-TÜV • Examined <b>Quality Management Auditor</b> QMA-TÜV
Oct. 2010 – Feb. 2011	• <b>Project Management</b> compact. HTW Berlin
Jan. 2008	• User Interfaces für Anwendungssoftware – Entwurf und Prototyping. Deutsche Informatik-Akademie, Dr. Wolfgang Dzida
Oct. 2007	• <b>Scrum Master</b> Certification Course. ScrumAlliance, Bas Vodde
2006/2007	• <b>Patent</b> «OMA-compliant Server-managed Ready to Push-to-Talk»
Sep./Oct. 1991	• Advanced School on the Algebraic Logical and Categorical Foundations of Concurrency, Gargnano del Garda. EATCS, ESPRIT
July/Aug. 1990	• International Summer School on Programming and Mathematical Method, Marktoberdorf. NATO Advanced Study Institute, TU München
July/Aug. 1989	• International Summer School on Logic, Algebra and computation, Marktoberdorf. NATO Advanced Study Institute, TU München

## EDUCATION

1995/1996:	• doctoral thesis: “Transparent Distribution of object-oriented Programs” • degree Dr. rer. nat. «magna cum laude», Freie Universität Berlin
► <i>Focus:</i>	• distribution and parallelism in object-oriented systems
1979 – 1987:	• studies of computer science and mathematics, Kiel • diploma degree, grade 1.0 (= “very good”, best grade); thesis: “implementation of a transition semantics for parallel programs with shared variables”
► <i>Focus:</i>	• software correctness, programming languages and compiler construction, parallel processing, computer architecture
1966 – 1978:	• school education, final grade 1.6 (1 = “very good”, 2 = “good”...)

## KNOW-HOW / SKILLS / PROFESSIONAL PROFILE

- *Extensive or recent experience is emphasized in bold*

### MANAGEMENT AND SOFT SKILLS

DEVELOPMENT PROCESSES AND PROJECT MANAGEMENT	
	<ul style="list-style-type: none"><li>• <b>Requirements Management, Change Request Management</b></li><li>• <b>Agile Processes</b>, agile development (<b>Certified Scrum Master</b>)</li><li>• <b>Quality Management</b> (Examined <b>Quality Management Representative and Auditor</b>)</li><li>• Project coordination, <b>International Project Teams</b></li><li>• Effort estimations and negotiations</li><li>• <b>Agile Usability Process</b></li></ul>
LEADERSHIP EXPERIENCE:	
	<ul style="list-style-type: none"><li>• Education (see teaching experience below), supervision of diploma theses</li><li>• <b>Coaching</b> of cooperation partners and offshore development</li><li>• <b>Team Leader</b> of product planning design teams and task force teams</li><li>• Technical coordination in <b>international projects</b></li></ul>
LANGUAGE KNOWLEDGE:	
	<ul style="list-style-type: none"><li>• Fluent <b>German</b> and <b>English</b></li><li>• Expandable French and Spanish</li></ul>

### TECHNOLOGIES

SYSTEM ARCHITECTURE:	
	<ul style="list-style-type: none"><li>• <b>System Engineering and Architecture</b> (interworking, components, standardization)</li><li>• <b>High Availability</b> systems ("carrier grade"), high-performance, scalable systems</li><li>• <b>System Specifications</b> (requirements, functional features, design)</li><li>• <b>Usability Engineering</b></li><li>• <b>Usability Guidelines</b> and <b>User Interface Design</b></li></ul>
PROGRAMMING LANGUAGES:	
	<ul style="list-style-type: none"><li>• <b>Java, Scala</b>, various legacy languages,</li><li>• Assembler languages (Siemens/IBM, Intel, Motorola)</li><li>• Scripting</li></ul>
OPERATING SYSTEMS:	
	<ul style="list-style-type: none"><li>• <b>Unix/Linux, Cygwin</b>, Apollo DomainOS</li><li>• BS2000, DEC TOPS/10, CP/M, <b>VMS</b></li><li>• MSDOS, Windows</li></ul>
TELECOMMUNICATION TECHNOLOGIES:	
	<ul style="list-style-type: none"><li>• <b>Protocols</b>, switching, control software, resource platforms</li><li>• <b>System Integration</b>, OEM test</li></ul>
COMMUNICATION TECHNOLOGIES:	
	<ul style="list-style-type: none"><li>• Internet protocols (HTTP, SIP, ...)</li><li>• <b>Web Interaction Technology</b> (REST approach)</li><li>• Communication protocols (SIP, SIP SIMPLE, ..., IN protocols, ...)</li><li>• Communication infrastructure (<b>IMS</b>, application servers, ...)</li></ul>
SOFTWARE TECHNOLOGIES:	
	<ul style="list-style-type: none"><li>• Compiler construction, hardware-related programming, correct software design</li><li>• <b>Software Design, Reliable Algorithms</b> design, refactoring and verification, <b>review</b> and testing, reverse engineering, software component <b>auditing</b></li><li>• <b>Software Paradigms</b>: object-oriented, functional, interfaces</li><li>• DBMS, <b>SQL</b>, JDBC</li><li>• Web design, <b>Client/Server Presentation Techniques</b> (HTML, JavaScript, CSS, JSP, ...)</li></ul>

## DEVELOPMENT PROJECTS

SOFTWARE DEVELOPMENT PROJECTS:	
	<ul style="list-style-type: none"><li>• Trigonometric calculation programs (for use in land register offices)</li><li>• Device drivers / complete BIOS for CP/M</li><li>• LISP compiler</li><li>• Semantic interpreter for parallel programs</li><li>• Stub generator for distributed Modula programs</li><li>• Distribution system for object-oriented programs</li><li>• Call control (telecommunication)</li></ul>
▶	<i>Server Components:</i>
	<ul style="list-style-type: none"><li>• <b>Web Server</b>, account management, user management GUI</li></ul>
▶	<i>Open Source:</i>
	<ul style="list-style-type: none"><li>• <b>Text and Program Editor with Unicode Support</b> (<a href="http://mired.sourceforge.net/">http://mired.sourceforge.net/</a>)</li><li>• Optimiser for PostScript fonts</li><li>• Contributions and review: cygwin, mintty, xterm, ...</li><li>• Maintainer of the <b>Cygwin Terminal</b> (<a href="http://mintty.github.io/">http://mintty.github.io/</a>)</li></ul>
HARDWARE DEVELOPMENT:	
	<ul style="list-style-type: none"><li>• Construction of a microcomputer from card modules, hardware debugging</li></ul>

## ACADEMIC PROFILE

### TEACHING EXPERIENCE

2018:	• distributed systems, HTW Berlin
2015/17:	• programming with Scala / functional programming, HTW Berlin
2013:	• computer science 2, HTW Berlin
2012/13:	• advanced programming techniques, HTW Berlin
since 1998:	• lectures and tutorials on digital technology, computer architecture, computer systems, TFH Berlin / Beuth-Hochschule für Technik Berlin
2010–2011:	• programming 2, HTW Berlin
2006:	• lectures and tutorials on computer systems, FHTW Berlin
1997:	• lecture and tutorial on object-oriented programming, FU Berlin
at FU Berlin:	• software training course, non-sequential programming tutorial • introduction to the object-oriented programming language Eiffel, programming for mathematicians • hardware training course
during studies:	• tutorial and practical courses in various fields, including programming, artificial intelligence, numerical analysis, • computer organisation, microprocessor programming
1977/78:	• computer science course at school in Eutin

### PUBLICATIONS AND PRESENTATIONS

- Implementation of a transition semantics for parallel programs with shared variables. In STACS '89, Paderborn, LNCS 349.
- Organization of mixed language programming in heterogeneous distributed systems. ESPRIT project Delta-4 report 4.5, 1988.
- Verteilung nebenläufiger objektorientierter Programme. Vortrag Arbeitskreistreffen Betriebssysteme der Gesellschaft für Informatik, Dresden 1992.
- On integrating concurrent computation into distributed objects with inheritance. Workshop on concurrency and distribution in object-orientation, TOOLS '93, Versailles.
- S. Finke, P. Jahn, O. Langmack, K.-P. Löhr, I. Piens, Th. Wolff: Distribution and inheritance in the HERON approach to heterogeneous computing. Proc. 13th Int. Conf. on Distributed Computing Systems (ICDCS), Pittsburgh 1993.
- P. Jahn, I. Piens, T. Wolff: The HERON transparent distribution system for heterogeneous high-level object-oriented programming. System demonstration at ECOOP '94, Bologna.
- Problems with language-conformant implementation of transparent distribution of a high-level object-oriented programming language. System Implementors' Workshop, ECOOP '94, Bologna.
- Klaus-Peter Löhr, Irina Piens, Thomas Wolff: Verteilungstransparenz bei der objektorientierten Entwicklung verteilter Applikationen. OBJEKTSpektrum November/ Dezember 1994 Nr 5.
- Transparently Distributing Objects with Inheritance. 28th Hawaii International Conference on System Sciences, Wailea 1995.
- Peter Hoffmann, Anton Weinberger, Thomas Wolff: Heterogene Transparenz bei der Verteilung von Objekten in HERON. Workshop Anwendungsunterstützung für heterogene Rechnernetze, Freiberg März 1995.
- Ganz Eiffel in 5 Tagen. Vortrag bei der Veranstaltung Eiffel in Schule und Hochschule, Darmstadt 1995.
- The moderate approach to integrating concurrency and object-orientation. Fachbereich Mathematik der FU Berlin, Report B-95-07, 1995.
- Transparent Object Distribution and Remote Inheritance. In Amr Zaky, Ted Lewis (eds.): Tools and Environments for Parallel and Distributed Systems, Kluwer 1996.
- Transparente Verteilung objektorientierter Programme. VDI Verlag 1996.

- T. Wolff, K.-P. Lühr: Transparently programming heterogeneous distributed systems. In Distributed Platforms, Proc. of the IFIP/IEEE International Conference on Distributed Platforms: Client/Server and Beyond: DCE, CORBA, ODP and Advanced Distributed Applications, Chapman & Hall 1996.
- Design strategy for an HTML administration and management user interface. Human Computer Interaction International (HCII) '99, München 1999.
- Java – eine Sprache für Alle(s)? Eine kritische Abhandlung. Vortrag FH Wedel Januar 2001.
- Kommunikation im e-Commerce. Vortrag FHTW Berlin Juni 2001.
- Postmoderne Software-Entwicklungsmethodik. Vortrag TFH Berlin November 2001.
- Architekturen und Plattformen für Web-Applikationen. Vortrag FHTW Berlin Januar 2002.
- Postmoderne Softwareentwicklung. Vortrag Max-Planck-Gesellschaft Januar 2002.
- Softwareentwicklung für verteilte Architekturen – Methoden und Rezepte. Vortrag FH Brandenburg März 2002.
- Aspekte der Hochverfügbarkeit in Servern für Telekommunikationsdienste. Vortrag TFH Berlin November 2004.
- Mined: An Editor with Extensive Unicode and CJK Support for the Text-based Terminal Environment. 27th Internationalization and Unicode Conference, Berlin 2005.