

CURRICULUM VITAE

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Executive Summary

Ralf S. Engelschall is a 46-year old *Computer Scientist*, living with his wife and three children in Munich, Germany. He has 32 years of computing, 29 years of software development and 18 years of management experiences.

Achievements He is the author of the books *Hierarchical User Interface Component Architecture* and *Apache Desktop Reference*, author of over a dozen IT magazine articles and author of hundreds of widespread Open Source software components, including the popular *Apache mod_rewrite* and *mod_ssl* extensions, the wide-spread *GNU Portable Threads*, *GNU Portable Shell Tool*, *OSSP mm* and *OSSP uuid* software components, the comprehensive *OpenPKG* cross-platform multi-instance Unix software packaging solution, the very flexible *ComponentJS* and *Microkernel* component systems and the advanced *GemstoneJS* and *GraphQL-IO* technology stacks.

He developed many comprehensive solutions, including a secure download platform for the music industry, a maintenance-free, world-wide distributed, fail-safe and load-balancing name-service setup for the ISP industry, multiple software development environments for the software industry, a conference planning and execution platform, a voting application, a campus management system, a multiple-choice test application, a video streaming platform, etc.

Contribution Beside being the founder of the popular Open Source software organizations *Apache Software Foundation*, *OpenSSL*, *OpenPKG* and *OSSP*, since over a decade he is an active developer in the *Apache*, *FreeBSD* and *GNU* software development projects. Additionally, he is founder and president of the *OpenPKG Foundation e.V.* and founder and managing director of the *OpenPKG GmbH*.

Attitude As a result-oriented person, he enjoys to adopt new technology and management challenges and looking beyond the ordinary when developing solutions. He especially is known in the world-wide Internet community for his unique passion and steadiness to design, architect, implement and publish popular Unix and Web software components which are accredited by experts to have a unique balance of both technical functionality and artistic aesthetics.

Capability His preferred work assignment consists of the roles *Software Architect* and *Executive Consultant* in challenging software development environments where his personal key competence areas are invaluable and profitable: *Software Engineering Methodology*, *Software Architecture*, *Project Management*, *Open Source Software*, *Unix Server Computing*, *Internet Networking Technologies*, *Cryptography* and *Web Technologies*.



Dr. rer. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Person & Contact

Person

■ Academic Degree:	Dr. rer. nat. Dipl.-Inf. Univ.	
■ Name:	Ralf S. Engelschall	
■ Birth:	November 17 th 1972	
■ Nationality:	German	
■ Marital Status:	married, 3 children	
■ Languages:	German	(native)
	English	(foreign)

Contact

■ Email:	rse@engelschall.com rse@openpkg.com ralf.engelschall@msg.group	
■ Web:	https://engelschall.com/ https://twitter.com/engelschall/ https://github.com/rse/	(website) (microblog) (repositories)
■ Phone:	+49-8131-56084	(UTC +0100)
■ Address:	Weblinger Weg 28 85221 Dachau GERMANY	

Domestic Circle

■ Wife:	Daniela C. Engelschall	(1973)
■ Children:	Noah S. Engelschall Jasmin L. Engelschall Oliver R. Engelschall	(2000) (2002) (2008)
■ Parents:	Diethard J. Engelschall + Doris G. Engelschall	(1938) (1949)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Profession & Achievements

Profession

- Promotion: **Computer Scientist** (germ. promovierter Diplom-Informatiker)
Doctoral topic: Hierarchical User Interface Component Architecture (HUICA)
Completion Title: Dr. rer. nat. (latin "Doctor rerum naturalium")
Completion Degree: magna cum laude
- Profession: **Computer Scientist** (germ. *Diplom-Informatiker*),
Major focus of study: Formal Languages, Parsing, Data Structures, Networking,
Subsidiary subject of study: Mathematics.
Completion Title: Dipl.-Inf. Univ. (germ. "Diplom-Informatiker Universität")
Completion Degree: 1,2
- Add-on Educations: **Certified Professional for Software Architecture** (iSAQB, CPSA-F)
Senior Project Manager (IPMA/GPM, level B),
Certified Scrum Master (Scrum Alliance, CSM)
- Memberships: *Association for Computing Machinery (ACM),
Gesellschaft für Informatik e.V. (GI),
Gesellschaft für Projektmanagement e.V. (GPM),
Scrum Alliance, Inc.,
XING AG (XING.com),
USENIX Association (USENIX),
OpenPKG Foundation e.V. (OpenPKG.net),
Apache Software Foundation (ASF).*

Achievements

- Business: Founder of institutions *OpenPKG GmbH* and *OpenPKG Foundation e.V.*
Founder of Open Source software projects *OpenPKG, OSSP, OpenSSL*.
Project manager in dozens of IT industry projects.
Architect in dozens of IT industry projects and Open Source projects.
- Publishing: Author of the book *Hierarchical User Interface Component Architecture (HUICA)*.
Author of the book *Apache Desktop Reference*.
Author of **16** IT magazine and CS scientific articles.
Supervision of **12** CS Master Thesis.
- Presentation: Presenter of **119** IT and CS presentations.
- Education: Trainer of **36** IT and CS trainings.
Lecturer of **25** IT and CS lectures.
- Developments: Author of over **160** Open Source software components.
Contributor at myriad of foreign Open Source software projects.
- Experiences: 32 years of computing,
29 years of Unix software development,
27 years of Internet solution development,
16 years of system administration,
15 years of knowledge publishing,
18 years of business management,
12 years of project management.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Education & Workings

Education

- 2013-2018: Universität Augsburg (UNIA),
course of studies: Computer Science, Software Architecture
final exam: **Doctoral** (germ. Promotion)
- 2014: iSAQB e.V. (International Software Architecture Qualification Board),
course of studies (Dr. Gernot Starke): **Mastering Software Architecture**,
final exam (Future Network Cert):
Certified Professional for Software Architecture (CPSA-F)
- 2011: Scrum Alliance, Inc.,
course of studies (agile42): **Certified Scrum Master** (CSM)
final exam: **Certified Scrum Master certificate**
- 2006-2007: International Project Management Association (IPMA),
Deutsche Gesellschaft für Projektmanagement (GPM), PM-ZERT,
course of studies: **Project Management** (IPMA level B)
final exam: **Senior Project Manager certificate** (IPMA level B)
- 2002-2003: International Project Management Association (IPMA),
Deutsche Gesellschaft für Projektmanagement (GPM), PM-ZERT,
course of studies: Project Management (IPMA level D)
final exam: Project Management Associate certificate (IPMA level D)
- 1993-1999: *Technische Universität München (TUM)*,
course of studies: **Computer Science** (germ. Informatik/Mathematik),
final exam: **University Diploma** (germ. Universitäts-Diplom).
- 1991-1993: *Fachhochschule (FH) München*,
course of studies: Informatik, Bereich Technik.
- 1989-1991: *Fachoberschule (FOS) München*,
course of studies: Bereich Technik,
final exam: university maturity (germ. Fachhochschulreife).

Schooling

- 1985-1989: *Realschule Dachau*,
final exam: middle maturity (germ. Mittlere Reife)
- 1983-1985: *Hauptschule Dachau*
- 1980-1983: *Grundschule Dachau*
- 1979-1980: *Grundschule Petershausen*

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Education & Workings

Employment

- since 2011: *msg systems ag*,
msg Applied Technology Research (XT), Munich, DE:
Director, Executive IT Consultant, Software Architect.
- 2007-2011: *Capgemini sd&m AG*,
Capgemini sd&m Research, Munich, DE:
Principal Consultant, Software Architect, Project Manager.
- since 2006: *OpenPKG GmbH*, Dachau, DE:
Founder, Managing Director, Software Architect, Project Manager.
- 2000-2005: *Cable & Wireless Telecommunication Services GmbH*,
Datacenter Services, Munich, DE:
Teamleader Development, Project Manager.
- 1998-2000: *ECRC Network Solutions GmbH*,
Internet Services, Munich, DE:
Software Developer.
- 1994-1995: *Technische Universität München (TUM)*,
Chair Prof. Broy, Munich, DE:
Student Trainee, System Administrator.
- 1992-1998: *sd&m GmbH*,
Technische Infrastruktur (TI), Munich, DE:
Student Trainee, System Administrator.

Affiliations

- 2005-2018: *OpenPKG Foundation e.V.*, DE:
Founder, President and Developer.
- since 1998: *FreeBSD*, USA:
Software Developer.
- since 1996: *Apache Software Foundation (ASF)*, USA:
Software Developer.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Skills & Qualification

Expert Skills

- Computer Science: Algorithms, Data Structures, Cryptography, Formal Languages, Parsing, Compiler Construction, Operating Systems.
- Software Engineering: Architecture, Methodology (Domains & Disciplines), Design, Implementation, Debugging, Build, Deployment, Configuration Management, Release Engineering.
- Software Development: API Design, Abstraction Layers, Portability, Version Control.
- Programming Languages: C/C++, Scala, Java, JavaScript, ActionScript, JavaFX Script, Perl, PHP, Lua, Bourne-Shell.
- Markup Languages: XML/XSLT, SGML/DTD, DocBook, XUL, HTML/CSS/DOM, RDF, TeX/LaTeX, POD.
- Query Languages: SQL, XPath, RegExp, Shell Globs.
- Operating Systems: FreeBSD, GNU/Linux, Solaris, macOS, Windows.
- Unix: Multithreading, Daemons, Sockets, Packaging, Large-scale Deployments, Clustering, Migrations, Upgrades.
- Internet Application: DHTML/AJAX, XML-RPC, CGI, REST, GraphQL.
- Internet Networking: Routing, NAT, VPN, Firewall.
- Networking OSI 5-7: HTTP/HTTPS, STOMP, SMTP/LTMP, IMAP, POP3, FTP, NNTP, NTP, SSL/TLS, SSH, NFS, BGP.
- Networking OSI 3-5: IP, ICMP, ARP, DHCP, UDP, TCP, VRRP, CARP.
- Networking OSI 1-2: Ethernet, Switching, Bridging, Trunking, VLAN, PPP, Serial, ISDN.
- Hardware: Personal Computer (PC), Server Computer
- Security: System Analysis, Protocols, PKI, Application Patching, Patch Backporting.
- Office Applications: PowerPoint, Excel, Word, Visio, OmniGraffle, Photoshop, Illustrator, InDesign.
- Legal: Open Source Software Licensing.
- Organization: Open Source Software Business Models.
- Knowledge: Education, Training, Publishing.
- Management: Business Management, Project Management.

Profession Passion

- Hobby-Horses: Modeling, APIs, FreeBSD Unix, iOS, macOS, C, Perl, Scala, HTML/CSS/JavaScript, Graphics Design, Typography, Regular Expressions, Parsing, Data Structures, Version Control, Cryptography.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Aptitude & Roles

Profession Aptitude

- Computer Science: Education with a rock-solid theory foundation, *magna cum laude* doctoral and diploma certifications and a decade of experiences in practice provide prerequisite to invent innovative IT solutions.
- Software Development: Passion to design, architect and implement software solutions with a great balance of functional and aesthetic claim.
- Quality Assurance: Perception to analyze, troubleshoot and fix complex software solutions and IT setups.
- Technical Consulting: Experience in knowing possibilities, looking beyond the ordinary and exploring ultimate technical feasibilities.
- Publishing & Training: Ability to comprehend difficult issues, consolidate and present their essentials to motivate and educate people.
- Management: Sense to guide and lead people to successfully drive and complete missions.
- Entrepreneurship: Visions of new approaches and passion to adopt new challenges.

Roles & Preference

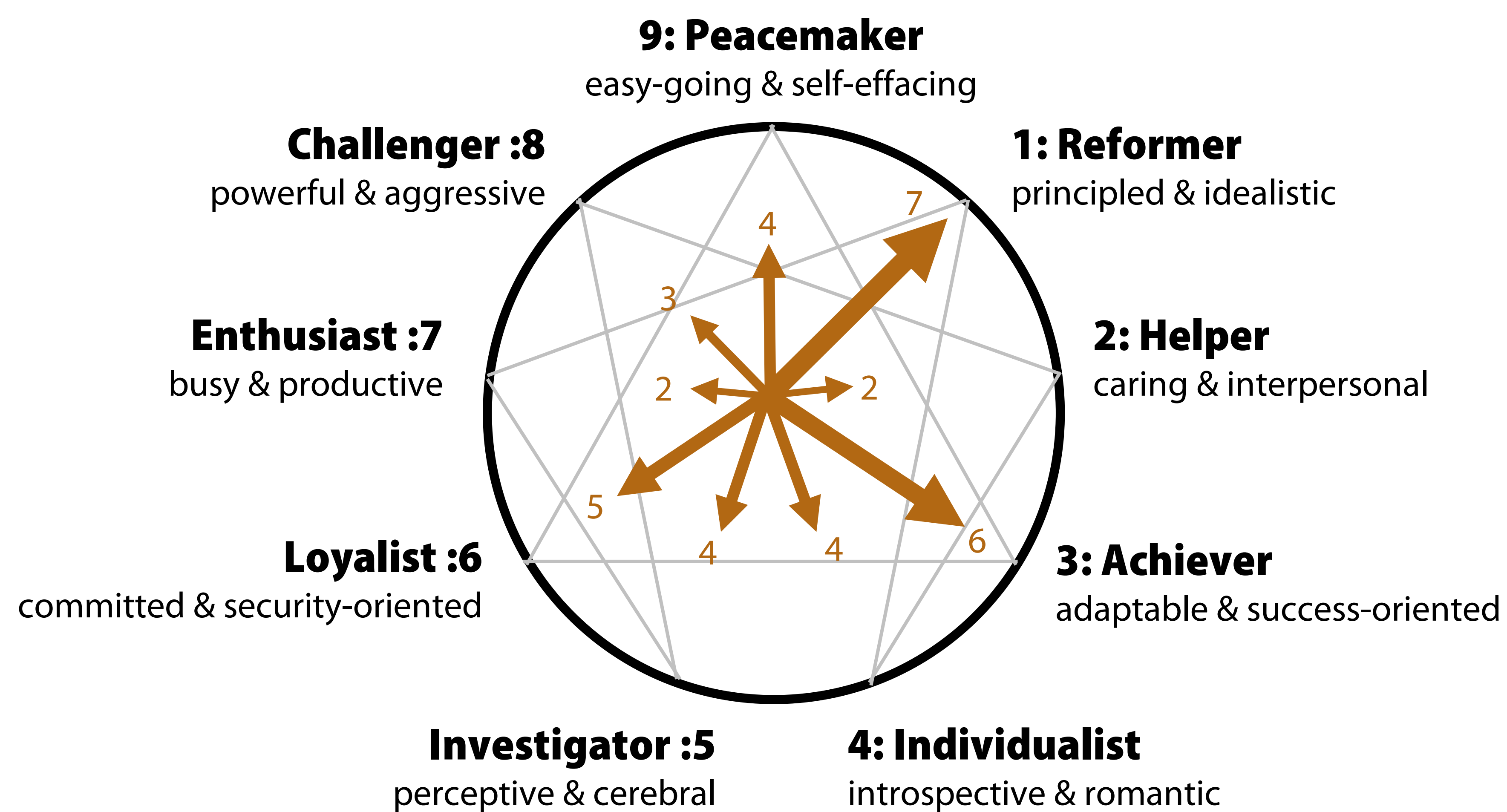
■ Profession Roles:	Solution	Analyst	
	Solution	Architect	
	Software	Developer	
	Software	Artist	
	Technology	Consultant	
	Technology	Publicist	
	Technology	Trainer	
	Project	Manager	
	Business	Manager	
	Business	Entrepreneur	

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

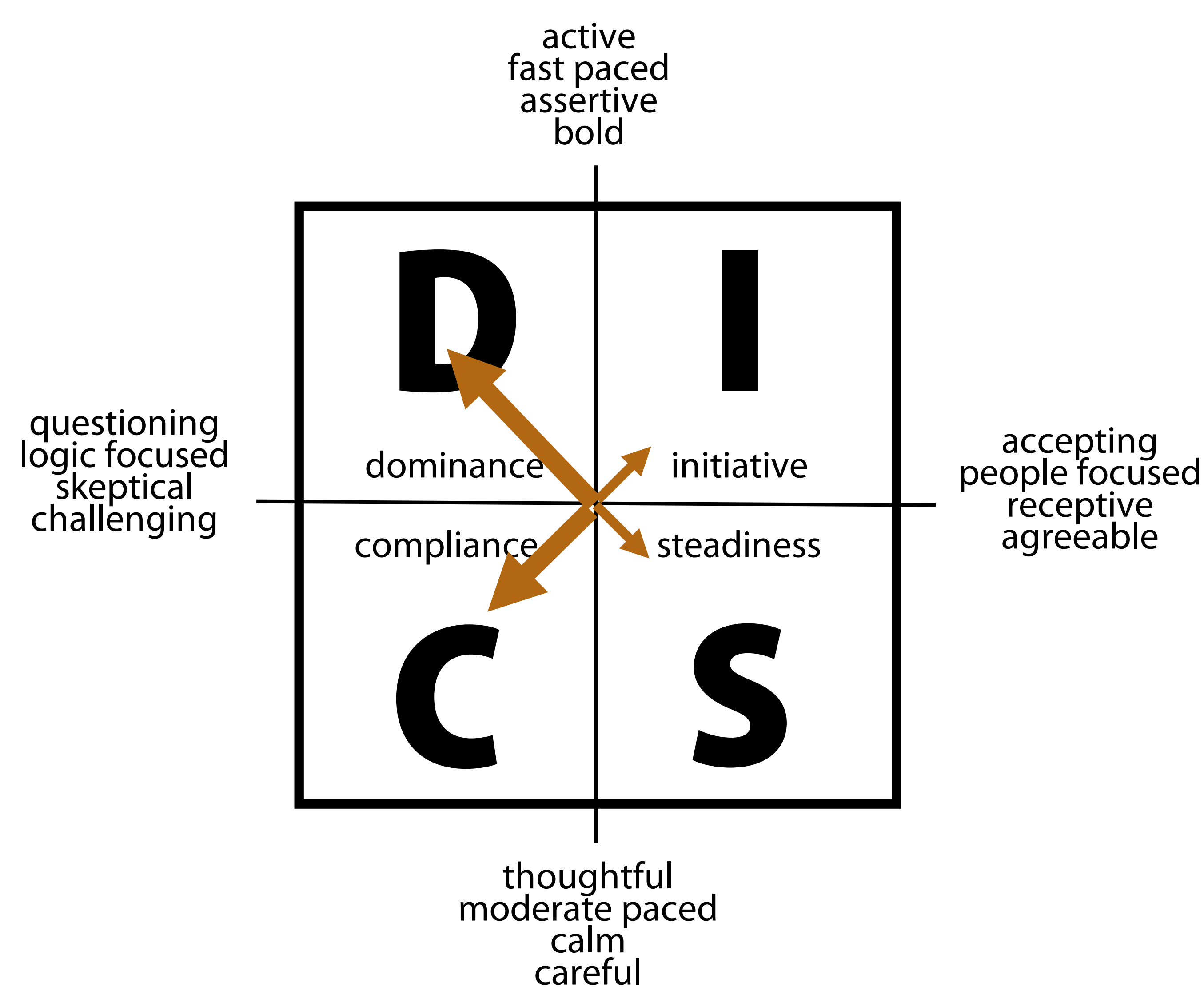
Perception & Behaviour

Personal Profile

■ Enneagram®:



■ DISC®:



■ Clifton StrengthFinder®:

- | | |
|-------------------------|--------------------------------|
| 01. Strategy | (Strategie) |
| 02. Significance | (Bedeutsamkeit) |
| 03. Achiever | (Leistungsorientierung) |
| 04. Futuristic | (Zukunftsorientierung) |
| 05. Relator | (Bindungsfähigkeit) |
| 06. Focus | (Fokus) |
| 07. Self-Assurance | (Selbstbewusstsein) |
| 08. Activator | (Tatkraft) |
| 09. Maximizer | (Höchstleistung) |
| 10. ... | ... |

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Writing & Publication

Publications

- 2019-05: *"Blockchain – Suchen wir nur das Problem zur Lösung?"*, germ., Informatik Spektrum, issue 2019/05, DE.
- 2012-03: *"Architektur vs. Lizenzrecht: Lizenzkonforme Verbauung von Open-Source-Software"*, germ., OBJEKTSpektrum, issue 2012/3, Munich, DE.
- 2010-07: *"A Plea for Pluggable Programming Language Features"*, engl., Proceedings of 5th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2010), pp. 5-11, Athens, GR. (*Best Paper Award*)
- 2010-07: *"Language-Oriented Programming via DSL Stacking"*, engl., Proceedings of 5th International Conference on Software and Data Technologies (ICSOFT 2010), Vol 2., pp. 279-287, Athens, GR.
- 2010-01: *"Quasar 2.0 – Software Engineering Patterns"*, engl., Capgemini sd&m AG, sd&m Research, Munich, DE.
- 2009-09: *"Erweiterter Paketversand"*, germ., c't Magazine, issue 20/2009, p.184-187, Heise Verlag, DE.
- 2009-02: *"Open Source: Freiheitskampf zwischen Kunst und Kommerz"*, germ., OBJEKTSpektrum, issue 2009/2, Munich, DE.
- 2008-07: *"Open Source — Kunst & Kommerz kombinieren"*, germ., Capgemini sd&m AG: m&it, issue 7/2008, Munich, DE.
- 2002-10: *"Cross-platform Unix software packaging with OpenPKG"*, engl., SysAdmin magazine, USA.
- 2001-12: *"OpenPKG Handbook"*, engl., The OpenPKG Project, Munich. DE.
- 2000-12: *"Apache Desktop Reference"*, engl., Addison Wesley, USA, ISBN 0201604701.
- 2000-06: *"Portable Multithreading – The Signal Stack Trick Of User-Space Thread Creation"*, engl., USENIX Annual Technical Conference, San Diego (USA).
- 1998-08: *"Analyse, Spezifikation und Architektur eines Werkzeugs zur Transformation strukturierter Texte"*, germ., Technische Universität München (TUM), Munich, DE.
- 1998-05: *"Website Load Balancing: Practical approaches for distributing HTTP traffic"*, engl., WEBTechniques, issue 5/1998, Miller Freeman, USA.
- 1997-12: *"Weich gebettet - Perl in HTML integriert"*, germ., iX Magazine, issue 12/1997, p.165-167, Heise Verlag, DE.
- 1997-04: *"Der kleine Unterschied - Optimale Darstellung von Grafiken im WWW"*, germ., iX Magazine, issue 04/1997, p.162-167, Heise Verlag, DE.
- 1996-12: *"Nachsendeantrag - URL-Manipulationen mit Apache"*, germ., iX Magazine, issue 12/1996, p.149-155, Heise Verlag, DE.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Mentoring & Supervision

Master Thesis

- 2015-01: Constantin Gerstberger
(Elitestudiengang Software Engineering, Uni Augsburg):
"Towards a Data-Driven Enterprise Resource Architecture"
- 2014-11: Johannes Rummel
(Elitestudiengang Software Engineering, Uni Augsburg):
"Holistic Approach for a Separable, Reactive, Model-Agnostic View Data Binding"
- 2014-12: Cristian-Viktor Ardelean
(Elitestudiengang Software Engineering, Uni Augsburg):
"Data Synchronization Across Many Concurrent Peers"
- 2014-03: Stefanie Grewenig
(Elitestudiengang Software Engineering, Uni Augsburg):
"From High-Usability Cross-Device Wireframe-Based Storyboards to Component-Oriented Responsive-Design User Interfaces"
- 2014-02: Adrian Streit (TU München):
"Challenges and Solutions of Polyglot Persistence in Enterprise Information Systems"
- 2014-01: Christian Vaas
(Elitestudiengang Software Engineering, Uni Augsburg):
"Pattern Guideline and Constraint Validation of Run-time Communication in User Interface Component Architectures"
- 2011-06: Max Hohenegger (TU München):
"Ein musterbasierter Ansatz zur konstruktiven und analytischen Qualitätssicherung des Softwarekonfiguration"
- 2010-05: Iris Aigner (TU Darmstadt):
"Decision Making – Methodik und unterstützendes Werkzeug für den Einsatz von Entscheidungsmatrizen im Projektmanagementumfeld"
- 2009-10: Martin Kreidenweis
(Elitestudiengang Software Engineering, Uni Augsburg):
"Software Configuration Management in Centralized and Distributed Custom Software Development"
(Best Thesis Award)
- 2009-10: Omar Diego Vera Ustariz (TU München):
"Specification, Design and Development of the Server Component of a Topic Maps-based Distributed Information System"
- 2009-09: Torsten Witt (LMU München):
"Conception and Implementation of a Visual Editor for Topic Maps"
- 2009-04: Bastian Hahn (TU Dresden):
"Konzeptionelle Ausarbeitung und Erstellung eines Prototyps zur Visualisierung von verteilten und sich überlagernden Topic Maps unterschiedlicher qualitativer Gewichtung"

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Education

University Lectures

(part 1: 2019-2015)

- 2019-02: *"Hierarchical User Interface Component Architecture"*, Software Engineering 2019 Conference, Universität Stuttgart (DE), February 2019.
- 2018-11: *"Software Architecture"* (Block C+D) in *"Software Engineering in der industriellen Praxis (SEIP)"* (Prof. Matthes), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), November 2018.
- 2018-10: *"Architecture Fundamentals"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), October 2018.
- 2018-09: *"Projekte in Zeiten der Digitalisierung"*, Hochschule Landshut, Landshut (DE), September 2018.
- 2018-06: *"REST is dead, REST is bad: From SOAP, over REST to GraphQL and GraphQL-IO Application Client/Server Interfaces"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), June 2018.
- 2018-05: *"Open Source Software im Unternehmenseinsatz"* in *"Informationsmanagement"* (Prof. Krcmar), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), May 2018.
- 2017-11: *"Software Architecture"* (Block B) in *"Software Engineering in der industriellen Praxis (SEIP)"* (Prof. Matthes), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), November 2017.
- 2017-10: *"Crossing the Bridge between University and Industry"* (revision 2), Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), October 2017.
- 2017-05: *"Open Source Software im Unternehmenseinsatz"* in *"Informationsmanagement"* (Prof. Krcmar), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), May 2017.
- 2017-01: *"Evergreen Computing Habits"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), January 2017.
- 2016-11: *"Software Architecture"* (Block B) in *"Software Engineering in der industriellen Praxis (SEIP)"* (Prof. Matthes), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), November 2017.
- 2016-05: *"Open Source Software im Unternehmenseinsatz"* in *"Informationsmanagement"* (Prof. Krcmar), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), May 2016.
- 2016-04: *"Interface Design - Eine Schlüsseldisziplin im Bereich Software Architektur"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), April 2016.
- 2015-11: *"Microservice Architectures"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), November 2015.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Education

University Lectures

(part 2: 2015-2010)

- 2015-06: *"Open Source Software im Unternehmenseinsatz"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), June 2015.
- 2015-05: *"Open Source Software im Unternehmenseinsatz"* in *"Informationsmanagement"* (Prof. Krcmar), Fakultät für Informatik, Technische Universität München (TUM), Munich (DE), May 2015.
- 2014-11: *"Leadership Backstage – Blick hinter die Kulissen der Mitarbeiterführung in der IT"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), November 2014.
- 2014-05: *"Industrielle Software Engineering Prozesse"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), May 2014.
- 2013-11: *"Crossing the Bridge between University and Industry"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), November 2013.
- 2013-05: *"Polyglot Persistence – Boon and Bane for Software Architects"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), May 2013.
- 2012-11: *"User Interface Component Architecture"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), November 2012.
- 2012-05: *"Fundamental Architecture Maxims"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), May 2012.
- 2011-12: *"Software Architecture from an Industry Perspective"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), December 2011.
- 2011-05: *"Mobile Applications"*, Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), May 2011.
- 2010-10: *"Software Technology Trends 2010/2011"* (revision 2), Elitestudiengang Software Engineering, University Augsburg, Augsburg (DE), October 2010.
- 2010-04: *"Holistic Software Configuration Management"*, Elitestudiengang Software Engineering, Technische Universität München (TUM), Munich (DE), April 2010.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Training

Industry Trainings

(part 1: 2019-2017)

- 2019-04: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), April 2019.
- 2018-11: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), November 2018.
- 2018-10: *"Technology Stacks"* of Module 2 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), October 2018.
- 2018-10: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), October 2018.
- 2018-09: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Sep. 2018.
- 2018-07: *"Technology Stacks"* of Module 2 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), July 2017.
- 2018-05: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), May 2018.
- 2018-04: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), April 2018.
- 2017-12: *"Management TechREFRESH (Staffel 5)"*, msg systems ag, Munich (DE), Dezember 2017.
- 2017-11: *"Management TechREFRESH (Staffel 5)"*, msg systems ag, Munich (DE), November 2017.
- 2017-10: *"Technology Stacks"* of Module 2 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), October 2017.
- 2017-10: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), October 2017.
- 2017-10: *"Management TechREFRESH (Staffel 5)"*, msg systems ag, Munich (DE), Oktober 2017.
- 2017-09: *"Management TechREFRESH (Staffel 5)"*, msg systems ag, Cologne (DE), September 2017.
- 2017-09: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Sep. 2017.
- 2017-07: *"Technology Stacks"* of Module 2 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), July 2017.
- 2017-06: *"Grundlagen der IT-Architektur"*, msg systems Romania, Targo Murez (RO), June 2017.
- 2017-05: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), May 2017.
- 2017-04: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), April 2017.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Training

Industry Trainings

(part 2: 2016-2014)

- 2017-02: *"Methoden und Technologien der Digitalen Transformation"* (Woche 3) in MOOC "Mastering Digital Transformation", mooc.house/HPI, Berlin (DE), February 2017.
- 2016-11: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), November 2016.
- 2016-09: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Sep. 2016.
- 2016-07: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), July 2016.
- 2016-05: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), May 2016.
- 2016-04: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), April 2016.
- 2015-11: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Nov. 2015.
- 2015-10: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), October 2015.
- 2015-09: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Sep. 2015.
- 2015-07: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), July 2015.
- 2015-05: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), May 2015.
- 2015-04: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), April 2015.
- 2014-12: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Dec. 2014.
- 2014-11: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), November 2014.
- 2014-09: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), Sep. 2014.
- 2014-07: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), July 2014.
- 2014-05: *"Grundlagen der IT-Architektur"* as Module 1 in "IT-Architekten Ausbildungs-Programm (ITAAP)", msg systems ag, Munich (DE), May 2014.
- 2014-03: *"Grundlagen der IT-Architektur"*, msg systems ag, Munich (DE), March 2014.

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Qualification

Industry Presentations (part 1: 2019-2017)

- 2019-03: *"TechINSIGHT: Programatic Handling of Office Formats"*, msg systems ag, Munich (DE), March 2019.
- 2019-02: *"TechINSIGHT: Remote Browser Control with Puppeteer"*, msg systems ag, Munich (DE), February 2019.
- 2019-02: *"Current IT-Trends"*, msg Kick-Off 2019, msg systems ag, Munich (DE), February 2019.
- 2019-01: *"TechINSIGHT: Portainer WebUI for ProjectServer 4"*, msg systems ag, Munich (DE), January 2019.
- 2018-11: *"Current IT-Trends"*, msg.PM User-Forum 2018, msg nexinsure ag, Leipzig (DE), November 2018.
- 2018-10: *"Current IT-Trends"*, Automotive Seminar 2018, msg systems ag, Berlin (DE), October 2018.
- 2018-06: *"Real-Time Anwendungen auf Basis von GraphQL"*, EnterJS 2018, Darmstadt (DE), June 2018.
- 2018-06: *"DevOps – Briding the Gap between Development and Operations"*, DigiTreff 2018/06, msg systems ag, Munich (DE), June 2018.
- 2018-01: *"Artificial Intelligence & Machine Learning"*, Insurance-Kickoff 2018, msg systems ag, Munich (DE), January 2018.
- 2018-01: *"Digital Excellence auf Arbeitsebene"*, msg MA-Kickoff 2018, msg systems ag, Munich (DE), January 2018.
- 2018-01: *"Multimediale Kommunikation"*, msg FK-Kickoff 2018, msg systems ag, Munich (DE), January 2018.
- 2017-11: *"TechINSIGHT: Project Server 4.0"*, msg systems ag, Munich (DE), November 2017.
- 2017-10: *"TechINSIGHT: Systems of Engagement und Clustering"*, msg systems ag, Munich (DE), October 2017.
- 2017-10: *"Aktuelle IT-Trends"*, Insurance Summer Camp 2017, msg systems ag, Freising (DE), October 2017.
- 2017-10: *"TechINSIGHT: Real-Time GraphQL over WebSockets"*, msg systems ag, Munich (DE), October 2017.
- 2017-10: *"TechINSIGHT: Assembly Standard Process"*, msg systems ag, Munich (DE), October 2017.
- 2017-09: *"Digital Excellence" (revision 2)*, msg systems ag, msg.TV, Munich (DE), September 2017.
- 2017-06: *"Digital Excellence"*, msg systems ag, GB L, Fulda (DE), June 2017.
- 2017-03: *"Innovationen in Zeiten der Digitalen Transformation"*, AOK Systems, Berlin (DE), March 2017.

(organizational and non-qualification presentations not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Qualification

Industry Presentations (part 2: 2017-2015)

- 2017-02: *"Microservice Architecture"*, ITZ-Bund, Bundesverwaltungsamt (BVA), Cologne (DE), February 2017.
- 2017-02: *"Digital Transformation Cycle"*, STI Jahrestagung, Fraunhofer IESE, Karlsruhe (DE), February 2017.
- 2017-01: *"Mythen der Digitalisierung"*, msg Kick-off 2018, msg systems ag, Munich (DE), January 2017.
- 2016-12: *"TechINSIGHT: Gogs/Git Version Control System"*, msg systems ag, Munich (DE), December 2016.
- 2016-12: *"Modern Software- and Systems-Architecture" and "Modern User Interfaces"*, Bundesverwaltungsamt (BVA), Cologne (DE), December 2016.
- 2016-12: *"Microservices"*, Deutsche Bahn, Frankfurt am Main (DE), November 2016.
- 2016-10: *"TechINSIGHT: GraphQL"*, msg systems ag, Munich (DE), October 2016.
- 2016-09: *"Microservices"*, GSE Jahrestagung, Dresden (DE), September 2016.
- 2016-06: *"TechINSIGHT: RDBMS/NoSQL/NewSQL"*, msg systems ag, Munich (DE), June 2016.
- 2016-06: *"Application Landscape: Omni-Channel Strategy"*, msg systems ag, Hamburg (DE), June 2016.
- 2016-04: *"TechINSIGHT: HAPI REST Network Services"*, msg systems ag, Munich (DE), April 2016.
- 2016-04: *"Systems of Engagement" and "Architecture Viewpoints & Perspectives"*, Signal Iduna, Hamburg (DE), April 2016.
- 2016-04: *"TechINSIGHT: Web App Bundling with Browserify"*, msg systems ag, Munich (DE), April 2016.
- 2016-02: *"TechINSIGHT: Let's Encrypt and ACME"*, msg systems ag, Munich (DE), February 2016.
- 2016-01: *"Microservice Architecture"*, msg Kick-off 2016, msg systems ag, GB L, Munich (DE), January 2016.
- 2016-01: *"Digital Experience"*, msg Kick-off 2016, msg systems ag, Munich (DE), January 2016.
- 2015-12: *"Digitale Transformation"*, Versicherungskammer Bayern (VKB), Munich (DE), December 2015.
- 2015-11: *"Digitale Transformation"*, Innovationstag Industrie 4.0, msg systems ag, Munich (DE), November 2015.
- 2015-11: *"Microservice Architecture"*, msg systems ag, Munich (DE), November 2015.

(organizational and non-qualification presentations not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Qualification

Industry Presentations (part 3: 2015-2011)

- 2015-09: *"Digital Transformation Cycle"*, Innovationstag, Munich Re, Passau (DE), September 2015.
- 2015-09: *"HTML5 Single-Page-Applications"*, Innovationstag, Bundesagentur für Arbeit (BA), Munich (DE), September 2015.
- 2015-09: *"Microservice Architecture"*, Innovationstag, Bundesagentur für Arbeit (BA), Munich (DE), September 2015.
- 2015-07: *"Client Web Technology"*, Daimler, Stuttgart (DE), July 2015.
- 2015-06: *"Digital Transformation"*, Insurance Summer Camp, msg systems ag, Freising (DE), June 2015.
- 2015-04: *"TechINSIGHT: Parsing Techniques"*, msg systems ag, Munich (DE), April 2015.
- 2014-04: *"TechINSIGHT: Regular Expressions"*, msg systems ag, Munich (DE), April 2014.
- 2014-04: *"Typography, Fonts and the Web"*, msg systems ag, Munich (DE), April 2014.
- 2014-03: *"TechINSIGHT: Open Source Publishing Mechanisms"*, msg systems ag, Munich (DE), March 2014.
- 2013-11: *"TechINSIGHT: HTML5 Single-Page-Applications"*, msg systems ag, Munich (DE), November 2013.
- 2013-04: *"TechINSIGHT: PDF Generation with PDF.js"*, msg systems ag, Munich (DE), April 2013.
- 2013-03: *"Polyglot Persistence"*, msg systems ag, Munich (DE), March 2013.
- 2012-12: *"User Interface Component Architecture"*, msg systems ag, Munich (DE), December 2012.
- 2012-05: *"TechINSIGHT: Open Source Projects"*, msg systems ag, Munich (DE), May 2012.
- 2012-02: *"Mobile Computing Trends"*, engl., Allianz AG, Munich (DE), February 2012.
- 2011-07: *"Einsatz von Open Source Software"*, germ., msg systems ag, Branch Insurance, Munich (DE), July 2011
- 2011-05: *"Open Source Strategie"*, germ., msgGillardon, Munich (DE), May 2011
- 2011-05, 2011-04, 2011-03: *"Scala – The Next Java!?"*, engl., msg systems ag, XT Round, Munich (DE), March 2011, msg systems ag, Technology Workshop, Munich (DE), April 2011, msg systems ag, GB P, Munich (DE), May 2011.

(organizational and non-qualification presentations not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Qualification

Industry Presentations (part 4: 2010-2001)

- 2010-11: *"Software Technology Trends 2010/2011"* (version 2.1), engl., Capgemini CoC Architecture Summit 2010, Day 2, Munich/Aschheim (DE), November 2010,
- 2010-08: *"Capgemini CSD Research"*, engl., Capgemini sd&m AG, Munich (DE), April 2010, Capgemini sd&m AG, Frankfurt (DE), August 2010.
- 2010-06: *"Software Technology Trends 2010/2011"*, engl., Capgemini sd&m AG, Mespelbrunn (DE), Juni 2010, Capgemini sd&m AG, Munich (DE), Juli 2010.
- 2010-04: *"Typography, Fonts and the Web"*, engl., Capgemini sd&m AG, Munich (DE), April 2010.
- 2009-11: *"Engineers Camp 2009: Summary"*, engl., Capgemini sd&m AG, Munich (DE), November 2009.
- 2009-10: *"Quasar: delivering added value through holistic methodology"*, Capgemini CZ, CSD Sales Workshop, October 2009.
- 2009-02: *"Engineers Camp: Introduction I & II"*, engl., Capgemini sd&m AG, Munich (DE), February 2009.
- 2008-12: *"Software Configuration Management"*, engl., Capgemini sd&m AG, Munich (DE), December 2008.
- 2008-09: *"Developing Firefox Extensions"*, engl., Capgemini sd&m AG, Munich (DE), September 2008.
- 2008-05: *"sR SWW Intranet & Drupal CMS"*, engl., Capgemini sd&m AG, Munich (DE), May 2008.
- 2007-06: *"Bikeshed"*, engl., Gesellschaft für Projektmanagement (GPM), Nürnberg (DE), Juni 2006.
- 2007-03: *"Refining Open Source Unix Server Software"*, engl., Open Source Meets Business (OSMB) Congress, Nürnberg (DE); LBCN Finanzierungsforum, Nürnberg (DE).
- 2005-05,
2005-01,
2004-04,
2001-05: *"OpenPKG - Cross-Platform Software Packaging"*, engl., SpaceNet AG, Munich, May 2005; Cable & Wireless, London (UK), January 2005; Fraunhofer Gesellschaft (FhG), Karlsruhe, April 2004; Cable & Wireless, Munich (DE), May 2001.

(organizational and non-qualification presentations not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Presentation & Qualification

Industry Presentations (part 5: 2002-1997)

- 2002-08: *"Object Orientation"*, engl., Cable & Wireless, Munich (DE).
- 2002-07: *"Compiler Construction"*, engl., Cable & Wireless, Munich (DE).
- 2002-06: *"Secure Shell"*, engl., Cable & Wireless, Munich (DE).
- 2002-05: *"RSA Cryptography Algorithm"*, engl., Cable & Wireless, Munich (DE).
- 2002-02: *"Regular Expressions"*, engl., Cable & Wireless, Munich (DE).
- 2001-04: *"Security Solutions with SSL"*, engl., ApacheCon 2001 US, Santa Clara (USA), April 2001; ApacheCon 2000 EU, London (UK), October 2000.
- 2000-04: *"SSL/TLS with Apache, mod_ssl and OpenSSL"*, engl., GMX AG, Munich (DE), April 2000; ECRC GmbH, Munich (DE), November 1999.
- 1999-11: *"Behind the Scenes of Open Source Development"*, engl., ETH Zurich (ETHZ/EE/ISG), Zurich (CH), November 1999; Gesellschaft für Informatik (GI), Munich (DE), April 2004.
- 1999-04: *"Apache Architecture & Installation"*, engl., ECRC Network Solutions GmbH, Munich (DE), April 1999.
- 1998-03: *"Perl - Larry Wall's Practical Extraction and Reporting Language"*, engl., ECRC Network Solutions GmbH, Munich (DE), February 1999; sd&m GmbH & Co KG, Munich (DE), March 1998.
- 1998-10: *"Security with mod_ssl"*, engl., ApacheCon'98, San Francisco (USA), October 1998.
- 1998-01: *"Webdesign – Graphisches Seitendesign im Darstellungsmedium World Wide Web"*, germ., sd&m GmbH & Co KG, Garmisch-Partenkirchen (DE), January 1998.
- 1997-03: *"Web Technologie - Ein Blick in die technischen Interna des Darstellungsmediums World Wide Web"*, germ., sd&m GmbH & Co KG, Munich (DE), March 1997.

(organizational and non-qualification presentations not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Design & Authoring

Open Source Software (part 1: 2018-2019)

■	2019-04:	MinTTY-Config	[P] MinTTY/WSLTTY Standard Configuration
■	2018-10:	PeerTime	[L] Network Peer Time Synchronization
■	2018-09:	PDFBox-Simple	[L] Simple Node.js Binding for PDFBox
■	2018-05:	NPM Install-Fetch	[L] Fetch External Resources on Package Install.
■	2018-05:	NPM Execute	[L] Node Package Manager (NPM) Integration
■	2018-05:	IPC Mutex	[L] Mutual Exclusion Lock Abstraction Layer
■	2018-05:	FastText LID	[L] Node.js Binding for FastText Language Ident.
■	2018-05:	Stanford-POS-Tagger	[L] Stanford PoS-Tagger Binding for Node.js
■	2018-05:	Tika-Server	[L] Apache Tika Integration for Node.js
■	2018-05:	WordNet-LMF	[L] WordNet Lexical Markup Framework (LMF)
■	2018-05:	WordNet-RIS	[L] WordNet Reduced Information Set (RIS)
■	2018-04:	Source-Code-Error	[L] Render Error for Source-Code
■	2018-03:	JSON-ASTy	[L] Lossless JSON-to-AST Parser/Generator
■	2018-03:	Sieving	[L] Query-Based Item-List Reduction
■	2018-02:	MQTT-JSON-RPC	[L] MQTT over JSON-RPC Communication
■	2018-02:	Babel Named-Params	[L] Babel Transpiler Plugin: Named Parameters
■	2018-02:	Func-Params	[L] Run-Time Function Parameter Name Determ.
■	2017-12:	dotfiles	[T] Unix dot-file collection
■	2017-11:	<i>Bash FZF</i>	[P] Bash Extension for FZF Integration
■	2017-07:	<i>StdAPI</i>	[L] Standard Application Programming Interface
■	2017-07:	<i>TextFrame</i>	[L] Re-Frame Multi-Line Text
■	2017-07:	<i>Microkernel GraphQL-IO</i>	[P] Microkernel Plugin: GraphQL-IO Integration
■	2017-07:	<i>SysLoad</i>	[L] System Load Determination
■	2017-06:	<i>Encodr</i>	[L] Encoding/Decoding Abstraction Layer
■	2017-06:	<i>WebSocket Framed</i>	[L] Framed WebSocket Communication
■	2017-06:	<i>GraphQL-IO</i>	[F] Real-Time GraphQL Communication
■	2017-05:	<i>IPC KeyVal</i>	[L] Inter-Process-Comm. (IPC) Key-Value Store
■	2017-05:	<i>IPC PubSub</i>	[L] Inter-Process-Comm. (IPC) Publish-Subscribe
■	2017-05:	<i>GraphQL Query Compress</i>	[L] Compress GraphQL Queries
■	2017-05:	<i>HAPI Peer</i>	[P] HAPI Plugin: Peer Identification
■	2017-05:	<i>Apollo-Client WS</i>	[P] WebSocket Communication for Apollo Client
■	2017-05:	<i>DSig</i>	[L] Digital Signature Abstraction
■	2017-04:	<i>GemstoneJS</i>	[F] Web Technology Full-Stack
■	2017-04:	<i>Kickout</i>	[T] Conveniently Release NPM Packages
■	2017-04:	<i>DEXI</i>	[A] Digital Excellence Index Self-Assessment
■	2017-04:	<i>Style-Scope</i>	[P] PostCSS/PostHTML Plugins for Scoped Styles
■	2017-04:	<i>STMux</i>	[T] Simple Terminal Multiplexing for Build Env.
■	2017-04:	<i>Blessed XTerm</i>	[L] XTerm Widget for Blessed Curses Environment
■	2017-02:	<i>msg Cloud VDC CLI</i>	[T] Virtual Data Center (VDC) CLI

[A] Application, [T] Tool, [F] Framework, [L] Library, [P] Plugin

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Design & Authoring

Open Source Software (part 2: 2016)

■	2016-12:	<i>Code2XML</i>	[T] Source Code to XML Conversion
■	2016-10:	<i>Divertr</i>	[L] Text Diversion Filter
■	2016-10:	<i>HAPI Plugin GraphiQL</i>	[P] HAPI Plugin: GraphiQL Integration
■	2016-10:	<i>Installed Packages</i>	[L] Determine Installed NPM Packages
■	2016-09:	<i>vitruv CampS</i>	[A] Campus Management System
■	2016-08:	<i>Vote</i>	[A] Mobile Team Voting
■	2016-08:	<i>ComponentJS MVC</i>	[F] Model-View-Controller Abstraction Layer
■	2016-08:	<i>GraphQL-Tools Subscribe</i>	[P] GraphQL-Tools Subscription Facility
■	2016-08:	<i>GraphQL-Tools Sequelize</i>	[P] GraphQL-Tools & Sequelize ORM Integration
■	2016-08:	<i>GraphQL-Tools Types</i>	[P] GraphQL-Tools Custom Scalar Types
■	2016-08:	<i>jQuery Page</i>	[P] jQuery Plugin: Page Transitions
■	2016-08:	<i>Vue I18Next</i>	[P] VueJS Plugin: I18Next Integration
■	2016-08:	<i>Vue Params</i>	[P] VueJS Plugin: Global Parameters
■	2016-06:	<i>Excel Link Downloader</i>	[T] Downloading of Referenced Assets
■	2016-05:	<i>WebTV</i>	[A] Video Streaming Platform
■	2016-05:	<i>Microkernel Co</i>	[P] Microkernel Plugin: Co-Routines
■	2016-05:	<i>Microkernel Debug</i>	[P] Microkernel Plugin: Debugging Aid
■	2016-05:	<i>Microkernel AlaSQL</i>	[P] Microkernel Plugin: AlaSQL Integration
■	2016-05:	<i>Microkernel Cluster</i>	[P] Microkernel Plugin: Node.js Cluster Integration
■	2016-05:	<i>Microkernel GeolP</i>	[P] Microkernel Plugin: Geo-Location Resolving
■	2016-05:	<i>Microkernel HAPI</i>	[P] Microkernel Plugin: HAPI Integration
■	2016-05:	<i>Microkernel Logger</i>	[P] Microkernel Plugin: Logging Facility
■	2016-05:	<i>Microkernel Options</i>	[P] Microkernel Plugin: Configuration Options
■	2016-05:	<i>Microkernel Sequelize</i>	[P] Microkernel Plugin: Sequelize ORM Integration
■	2016-05:	<i>Microkernel Shutdown</i>	[P] Microkernel Plugin: Graceful Shutdown
■	2016-05:	<i>Microkernel Title</i>	[P] Microkernel Plugin: Unix Process Title
■	2016-05:	<i>Microkernel Daemon</i>	[P] Microkernel Plugin: Unix Process Daemon
■	2016-05:	<i>Microkernel Ctx</i>	[P] Microkernel Plugin: Run-Time Context
■	2016-05:	<i>Cfg</i>	[L] Configuration Parsing
■	2016-04:	<i>SysPath</i>	[L] System Paths Determination
■	2016-04:	<i>HAPI CO</i>	[P] HAPI Plugin: Co-Routines
■	2016-04:	<i>MostLikely</i>	[L] Most-Likely Classification (Bloom-Filtering)
■	2016-03:	<i>HAPI WebSocket</i>	[P] HAPI Plugin: WebSocket Communication
■	2016-03:	<i>VCheck</i>	[T] Upstream Vendor Version Checking
■	2016-03:	<i>HostId</i>	[T] Host UUID Determination
■	2016-03:	<i>HAPI Traffic</i>	[P] HAPI Plugin: Traffic Accounting
■	2016-03:	<i>HAPI DuckyJS</i>	[P] HAPI Plugin: DuckyJS Integration
■	2016-03:	<i>HAPI Header</i>	[P] HAPI Plugin: Custom HTTP Headers

[A] Application, [T] Tool, [F] Framework, [L] Library, [P] Plugin

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Design & Authoring

Open Source Software (part 3: 2015-2013)

■	2015-12:	<i>Upd</i>	[T] Upgrade NPM Package Dependencies
■	2015-12:	<i>Extraction</i>	[L] Tree Extraction for Object Graphs
■	2015-11:	<i>MCT</i>	[A] Multiple-Choice-Test Engine
■	2015-10:	<i>TimeKeeper</i>	[T] Slideshow Time Management
■	2015-08:	<i>Syntax</i>	[L] Unobtrusive Syntax Highlighting
■	2015-08:	<i>Latching</i>	[L] Run-Time Hook Latching
■	2015-06:	<i>Thenable</i>	[L] Embeddable Promises/A+
■	2015-05:	<i>Tokenizr</i>	[L] Flexible String Tokenization
■	2015-05:	<i>Glyphs2Font</i>	[T] SVG Glyph Icon to Web Font Generation
■	2015-04:	<i>Microkernel</i>	[F] Microkernel for Server Applications
■	2015-04:	<i>GDO</i>	[L] Group- and Dependency-based Ordering
■	2015-02:	<i>EntityIO</i>	[F] Domain Entity Management
■	2015-02:	<i>OSet</i>	[L] Ordered Set/Map Data Structure
■	2015-02:	<i>Cache LRU</i>	[L] Least-Recently-Used Caching
■	2015-01:	<i>Browserify Replace</i>	[P] Browserify Plugin: Text Replacement
■	2015-01:	<i>Browserify Derequire</i>	[P] Browserify Plugin: Require Call Renaming
■	2015-01:	<i>ASTy-ASTq</i>	[L] Abstract Syntax Tree Management & Querying
■	2015-01:	<i>ASTq</i>	[L] Abstract Syntax Tree Querying
■	2014-12:	<i>PEG.js OTF</i>	[L] On-The-Fly (OTF) Compilation for PEG.js
■	2014-12:	<i>PEG.js Util</i>	[L] Utility Class for PEG.js
■	2014-12:	<i>ASTy</i>	[L] Abstract Syntax Tree Management
■	2014-12:	<i>Browserify Header</i>	[P] Browserify Plugin: Header Provisioning
■	2014-09:	<i>SlideShow-Forecast</i>	[T] Slideshow Duration Forecasting
■	2014-07:	<i>Grunt Princess</i>	[P] Grunt Plugin: PrinceXML PDF Rendering
■	2014-06:	<i>SlideShow</i>	[L] Observe and Control Slideshow Applications
■	2014-04:	<i>Inline Assets</i>	[L] Inlining External Assets of HTML/CSS Files
■	2014-04:	<i>Node Prince</i>	[L] Node API for PrinceXML PDF Rendering
■	2014-04:	<i>Grunt Enigma VirtualBox</i>	[P] Grunt Plugin: Enigma Virtual Box Integration
■	2014-03:	<i>Grunt Traceur Simple</i>	[P] Grunt Plugin: Traceur Transpiler Integration
■	2013-12:	<i>sprintfjs</i>	[L] POSIX sprintf(3)-style String Formatting
■	2013-12:	<i>DuckyJS</i>	[L] Duck-Typed Value Handling
■	2013-12:	<i>XMLHttpRequest Cookie</i>	[P] Cookie-Handling for XMLHttpRequest
■	2013-12:	<i>GridLESS</i>	[L] Grid System for LESS CSS
■	2013-11:	<i>Grunt Bower Install Simple</i>	[P] Grunt Plugin: Bower Integration
■	2013-11:	<i>Grunt Replicate</i>	[P] Grunt Plugin: Directory Replication
■	2013-10:	<i>Grunt Util Digest</i>	[P] Grunt Plugin: Message Digest Calculation
■	2013-10:	<i>Grunt Newer Explicit</i>	[P] Grunt Plugin: Conditionally Running Tasks

[A] Application, [T] Tool, [F] Framework, [L] Library, [P] Plugin

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Design & Authoring

Open Source Software (part 4: 2013-2001)

■	2013-10:	<i>Grunt Path Check</i>	[P] Grunt Plugin: Program Existence Checking
■	2013-09:	<i>Grunt Extend Config</i>	[P] Grunt Plugin: Configuration Extension
■	2013-09:	<i>Grunt I18Next YAML</i>	[P] Grunt Plugin: I18Next Integration
■	2013-08:	<i>Grunt Expand Include</i>	[P] Grunt Plugin: Include Directive Expansion
■	2013-07:	<i>Grunt Merge JSON</i>	[P] Grunt Plugin: Merge JSON Configurations
■	2013-06:	<i>HTTP Proxy Simple</i>	[P] HTTP Proxy Extension for Header Interception
■	2013-05:	<i>jQuery Stage</i>	[P] jQuery Plugin: Dynamic Stage Information
■	2013-05:	<i>jQuery Markup</i>	[P] jQuery Plugin: Markup Generation
■	2013-05:	<i>Node Unix</i>	[L] Unix OS Integration for Node Packages
■	2012-06:	<i>ComponentJS</i>	[F] Hierarchical Component System for Rich-Clients
■	2011-09:	<i>Repository Manager</i>	[A] Version Control System Repository Setup
■	2011-06:	<i>Java Artifact Scanner</i>	[T] Recursive Scanner for Java Artifacts
■	2011-01:	<i>iTunes Movie Catalog</i>	[T] Generate Movie Catalog from iTunes
■	2010-06:	<i>PunBB/cg_sso</i>	[P] PunBB Single-Sign-On (SSO) Extension
■	2010-05:	<i>PunBB/pun_subscribe</i>	[P] PunBB Forum Mail Subscription Extension
■	2010-04:	<i>sXML</i>	[L] Simple XML
■	2009-01:	<i>EC Dashboard</i>	[A] Engineers Camp Dashboard
■	2008-11:	<i>Adventcalendar</i>	[A] Software Engineering Advent Calendar
■	2008-12:	<i>JUST</i>	[T] Java Unified Scripting Toolkit
■	2008-03:	<i>Apache mod_auth_trust</i>	[P] Apache Authentication for Reverse Proxy
■	2007-12:	<i>OpenPKG 4</i>	[T] Cross-Platform Software Packaging (4 th gen.)
■	2007-09:	<i>RPM 5</i>	[T] RPM5 Autoconf & Lua scripting
■	2006-11:	<i>OpenPKG 3</i>	[T] Cross-Platform Software Packaging (3 rd gen.)
■	2005-03:	<i>OSSP ase</i>	[A] Affiliation Service Environment
■	2005-01:	<i>OSSP uuid</i>	[L] Universally Unique Identifiers
■	2004-12:	<i>OSSP flow2rrd</i>	[T] NetFlow to Round-Robin Database
■	2004-07:	<i>OSSP svcs</i>	[T] Simple Versioning System
■	2003-08:	<i>OSSP snmpdx</i>	[P] SNMP Daemon Extension
■	2003-04:	<i>OSSP ac</i>	[T] Auto Connection
■	2002-06:	<i>OSSP cfg</i>	[L] Configuration Parsing
■	2002-04:	<i>OSSP mct</i>	[A] Multiple Choice Test Engine
■	2002-03:	<i>OSSP ex</i>	[L] Exception Handling Library
■	2002-01:	<i>OSSP val</i>	[L] Value Access Library
■	2002-01:	<i>OpenPKG 2</i>	[T] Cross-Platform Software Packaging (2 nd gen.)
■	2001-12:	<i>OSSP var</i>	[L] Variable Expansion Library
■	2001-08:	<i>OSSP sa</i>	[L] Socket Abstraction Library
■	2001-04:	<i>OSSP l2</i>	[L] Logging Library

[A] Application, [T] Tool, [F] Framework, [L] Library, [P] Plugin

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Design & Authoring

Open Source Software (part 5: 2000-1992)

■	2000-12:	<i>OpenPKG 1</i>	[T] Cross-Platform Software Packaging (1 st gen.)
■	2000-08:	<i>OSSP xenia</i>	[A] CVS Web Browsing Interface
■	2000-06:	<i>OSSP shiela</i>	[P] CVS ACL and Logging Facility
■	1999-11:	<i>OSSP str</i>	[L] Generic String Library
■	1999-04:	<i>GNU pth</i>	[L] GNU Portable Threads
■	1999-03:	<i>GNU shtool</i>	[L] GNU Portable Shell Tool
■	1999-01:	<i>OSSP mm</i>	[L] Shared Memory Library
■	1998-07:	<i>Apache mod_ssl</i>	[P] Apache Interface to OpenSSL
■	1998-04:	<i>Apache mod_so</i>	[P] Apache Shared Object Facility
■	1997-11:	<i>LCWA</i>	[T] Last Changes Web Agent
■	1997-10:	<i>SMTPclient</i>	[T] Mail Delivery Tool
■	1997-09:	<i>OSSP iselect</i>	[T] Interactive Selection Tool
■	1997-03:	<i>gFONT</i>	[T] GIF rendering with TeX-Fonts
■	1997-02:	<i>WML</i>	[T] Website META Language
■	1997-03:	<i>Vpath</i>	[L] Virtual Path Mapping
■	1997-01:	<i>Slice</i>	[T] Extraction of Text Slices
■	1996-04:	<i>Apache mod_rewrite</i>	[P] Apache URL Rewriting Engine
■	1996-03:	<i>OSSP eperl</i>	[T] Embedded Perl Language
■	1996-02:	<i>NLP</i>	[T] Postscript Printer Frontend
■	1994-07:	<i>OSSP smake</i>	[T] Skeleton Make
■	1993-07:	<i>XCD</i>	[T] Extended Change Directory
■	1992-06:	<i>UUTraf</i>	[T] UUCP Traffic Statistics
■	1992-04:	<i>UUPoll</i>	[T] UUCP Polling Manager

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Participation & Contribution

Major Projects

- 2017-2018: msg systems ag, Munich, DE:
Development of Project Server 4.0 platform.
- 2016-2017: msg systems ag, Munich, DE:
Development of voting application Vote.
- 2015-2017: msg systems ag, Munich, DE:
Development of video streaming platform WebTV.
- 2014-2015: msg systems ag, Munich, DE:
Development of Project Server 2.0 platform.
- 2012-2013: msg systems ag, Munich, DE:
Development of Mission Control system.
- 2010-2011: OpenPKG GmbH, Dachau, DE:
Project Management and Software Architecture of MyPress .
- 2007-2010: Capgemini sd&m AG, Capgemini sd&m Research, Munich, DE:
Management of 8 parallel "Quasar Development" projects
- 2006-2006: OpenPKG GmbH, Dachau, DE:
Development of new product "OpenPKG Enterprise 1".
- 2005-2006: OpenPKG GmbH, Dachau, DE:
Establishment of organization and infrastructure.
- 2005-2005: OpenPKG Foundation e.V., Dachau, DE:
Establishment of organization and infrastructure.
- 2005-2005: Cable & Wireless, Munich/London, DE/UK:
Migration of "Music Download Platform" from DE to UK.
- 2004-2005: Cable & Wireless, Munich/London, DE/UK:
Trade-Sale of Munich datacenter.
- 2003-2004: Cable & Wireless, Munich, DE:
Release engineering of product "OpenPKG Community 2.0".
- 2003-2005: Cable & Wireless, Munich/London, DE/UK:
Next-Generation fail-safe and load-balanced
world-wide Domain Name System (DNS) infrastructure.
- 2002-2002: Cable & Wireless, Munich, DE:
Development and establishment of "Ringvorlesungsreihe".
- 2000-2001: Cable & Wireless, Munich, DE:
Establishment of "Development Team".
- 1999-2000: Franziskuswerk Schönbrunn (FWS), Schönbrunn, DE:
Global Internet connectivity provisioning and implementation.
- 1995-1996: sd&m, Munich, DE: ("Internet am Arbeitsplatz")
Global Internet connectivity provisioning and implementation.
- 1994-1995: sd&m, Munich, DE: ("Internet")
Local Internet connectivity provisioning and implementation.
- 1992-1993: sd&m, Munich, DE: ("FI TI")
Establishment of technical infrastructure of new division.

(projects under NDA not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

Participation & Contribution

Major Participations

■	1997-2010:	<i>FreeBSD</i>	Operating System	(developer)
■	1998-2010:	<i>OpenSSL</i>	Cryptography Toolkit	(developer, founder)
■	1998-2010:	<i>OSSP</i>	System Technologies	(developer, founder)
■	1999-2010:	<i>GNU</i>	System Technologies	(developer)
■	2001-2019:	<i>OpenPKG</i>	Packaging Toolkit	(developer, founder)
■	2016-2019:	<i>GemstoneJS</i>	JavaScript Technology Stack	(developer, founder)

Major Contributions

■	2001-2010:	<i>RPM 5</i>	Package Manager	(developer, founder)
■	2005-2010:	<i>CVStrac</i>	Version Control Web-UI	(developer)
■	2007-2010:	<i>Monotone</i>	Version Control System	(developer)
■	2007-2010:	<i>jQuery</i>	DOM/AJAX Library	(contributor)

(proprietary software not listed)

Dr. ret. nat. Dipl.-Inf. Univ. Ralf S. Engelschall

References & Links

References

- Ralf S. Engelschall: *Engelschall*
Technology Tweets (microblog)
Source Code (repositories)
<https://engelschall.com/>
<https://twitter.com/engelschall>
<https://github.com/rse/>
- OpenPKG: *OpenPKG*
OpenPKG GmbH
OpenPKG Foundation e.V.
<http://www.openpkg.org/>
<http://www.openpkg.com/>
<http://www.openpkg.net/>
- OSSP: *OSSP*
<http://www.oss.org/>
- FreeBSD: *FreeBSD*
<http://www.freebsd.org/>
- Apache: *Apache Software Foundation (ASF)*
<http://www.apache.org/>
- FSF/GNU: *Free Software Foundation (FSF)*
GNU is not Unix (GNU)
<http://www.fsf.org/>
<http://www.gnu.org/>
- Cable & Wireless: *Cable & Wireless UK*
Cable & Wireless DE
<http://www.cw.com/>
<http://www.cw.com/de>
- Capgemini sd&m: *Capgemini sd&m AG*
<http://www.de.capgemini-sdm.com/>
- msg systems: *msg systems ag:*
<http://www.msg-systems.com/>
- TUM: *Technische Universität München*
Fakultät für Informatik
<http://www.tum.de/>
<http://www.in.tum.de/>
- GI: *Gesellschaft für Informatik*
<http://www.gi-ev.de/>
- GPM/IPMA: *Gesellschaft für Projektmanagement*
International Project Management Assoc.
<http://www.gpm-ipma.de/>
<http://www.ipma.ch/>
- iSAQB: *iSAQB e.V.*
<http://www.isaqb.org/>
- Scrum Alliance: *Scrum Alliance*
<http://www.scrumalliance.org/>
- USENIX: *USENIX Association*
<http://www.usenix.org/>

Document Status:

Created: 2001-06-23

Updated: 2019-04-21

Version: 2

Revision: 38