



Aspects and correlations of (embedded) software architecture in a mind map

Dirk Engel, info@engel-internet.de – first version 2019/01/26, last update 2023/03/19

Bibliography – General

O. Vogel et al., "Software-Architektur / Grundlagen – Konzepte – Praxis", Spektrum Akademischer Verlag, 2005, ISBN 3-8274-1534-9

Mahbouba Gharbi et al., "Basiswissen für Softwarearchitekten", dpunkt.Verlag GmbH, 2018, ISBN 978-3-86490-499-8

Bibliography – Mind Map Links

4+1	https://www.cs.ubc.ca/~gregor/teaching/papers/4+1view-architecture.pdf (2019/01/14)
ADR	Architectural Decision Records (ADRs): https://adr.github.io/ (2022/11/07)
agile vs. traditional	https://agilemanifesto.org/ (2019/01/14)
aim42	https://www.aim42.org/using (2019/01/26)
arc42	https://arc42.org/ (2021/11/27)
architectural patterns	Frank Buschmann et al., "Pattern-Oriented Software Architecture / A System of Patterns", John Wiley & Sons, Ltd, 1996, ISBN 978-0-471-95869-7
ATAM	https://resources.sei.cmu.edu/library/asset-view.cfm?assetid=5177 (2021/12/18)
avoid complexity	John Ousterhout, "A Philosophy of Software Design", Yaknyam, 2018, ISBN 978-1-7321022-0-0
C4	https://c4model.com/ and https://en.wikipedia.org/wiki/C4_model (2022/07/31)
capabilities	http://man7.org/linux/man-pages/man7/capabilities.7.html (2019/01/14)
categories	Johannes Siedersleben, "Moderne Softwarearchitektur", dpunkt.verlag GmbH, 2004, ISBN 3-89864-292-5
cgroups	https://en.wikipedia.org/wiki/Cgroups (2019/01/14)
challenges	"Challenges Using Linux as a Real-Time Operating System"; https://ntrs.nasa.gov/citations/20200002390 (2022/03/19)
characteristics	http://www.informit.com/articles/article.aspx?p=1152528&seqNum=4 (2019/01/14)
concentric architectures	https://blog.cleancoder.com/uncle-bob/2012/08/13/the-clean-architecture.html (2020/12/26)
concept	https://www.merriam-webster.com/dictionary/concept (2022/05/14)
container	https://jvns.ca/blog/2016/10/10/what-even-is-a-container/ (2019/01/15)
Conway's law	https://en.wikipedia.org/wiki/Conway%27s_Law (2019/01/14)
CVEs	https://cve.mitre.org/ (2019/01/04)
CUPID	"SOLID vs. CUPID": https://youtu.be/2QahGarHpXQ (2022/02/05)
debugging rules	David J. Agans, "Debugging", AMACOM, 2002, ISBN 0-8144-7168-4
design	https://dictionary.cambridge.org/de/worterbuch/englisch/design (2019/01/07)
design decisions	"A documentation framework for architecture decisions"; http://www.iso-architecture.org/viewpoints/docs/Heesch_Avgeriou_Hilliard-JSS-2011b.pdf (2022/05/14)
design patterns	Erich Gamma et al., "Design Patterns / Elements of Reusable Object-Oriented Software", Addison-Wesley, 1994, ISBN 0-201-63361-2
docs as code	https://www.writethedocs.org/guide/docs-as-code/ (2022/10/22)
domain	Eric Evans, "Domain-Driven Design: Tackling Complexity in the Heart of Software", Addison-Wesley, 2003, ISBN 0-321-12521-5
element	https://www.merriam-webster.com/dictionary/element (2022/05/14)
enterprise architect	Wolfgang Goebl et al., "Enterprise Design Patterns / 35 Ways to Radically Increase Your Impact on the Enterprise", Intersection Group, 2020.
environment	https://www.merriam-webster.com/dictionary/environment (2019/01/07)
evidence-based	http://www.knosof.co.uk/ESEUR/ESEUR-mobile.pdf (version 1.0 from 2020/11/08)
evolution	http://nectunt.bifi.es/to-learn-more-overview/mechanisms-of-evolutionary-change/ (2019/01/14)
FURPS	https://en.wikipedia.org/wiki/FURPS (2019/01/14)
GPL infected	https://yarchive.net/comp/linux/gpl_modules.html (2019/01/14)
hierachical	"The C4 model for visualising software architecture: Context, Containers, Components, and Code"; https://c4model.com/ (2022/05/14)
human resources	https://github.com/dirkengel/articles/blob/main/FTEbasedPlanning.pdf (2018/10/11)
idioms	https://www.oreilly.com/library/view/pattern-oriented-software-architecture/9781118725269/OEBPS/9781118725269_c04.htm (2019/01/14)
Information Hiding	https://en.wikipedia.org/wiki/Information_hiding (2019/01/14)
interlinked	Stefan Toth, "Vorgehensmuster für Software-Architektur", Hanser, 2014, ISBN 978-3-446-43762-3
ISO-21343	https://www.iso.org/standard/70918.html (2022/10/26)
ISO-25010	https://iso25000.com/index.php/en/iso-25000-standards/iso-25010 (2019/01/14)
ISO-26262	https://www.iso.org/standard/43464.html (2019/01/14)
key principles	https://docs.microsoft.com/en-us/previous-versions/msp-n-p/ee658124(v=pandp.10)#KeyDesignPrinciples (2021/11/12)
language (pattern)	Christopher Alexander et al., "A Pattern Language: Towns, Buildings, Construction", Oxford University Press, 1977, ISBN 0-19-501919-9
leaky	https://www.joelonsoftware.com/2002/11/11/the-law-of-leaky-abstractions/ (2021/11/12)
logging vs. tracing	https://en.wikipedia.org/wiki/Tracing_(software)#Event_logging_versus_tracing (2019/01/08)
management triangle	https://github.com/dirkengel/articles/blob/main/QualityAndTheProjectManagementTriangle.pdf (2021/10/24)
metrics (general)	Kan S. H. "Metrics and Models in Software Quality Engineering", Addison-Wesley, 2 nd ed., 2002.
	"Metrics in automotive software development: A systematic literature review"; https://onlinelibrary.wiley.com/doi/epdf/10.1002/smr.2296 (2022/01/26)
metrics (tracking)	https://www.thoughtworks.com/insights/articles/fitness-function-driven-development (2021/10/24)
	https://github.com/dirkengel/articles/blob/main/TheOzoneHoleMetric.pdf (2021/10/24)
microservices	Mark Richards, "Software Architecture Patterns", O'Reilly Media, Inc., 2015, ISBN 9781491924242
namespace	http://man7.org/linux/man-pages/man7/namespaces.7.html (2019/01/15)
narrow contract	http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2019/p1743r0.pdf (2021/12/03)
obstructive	Stefan Toth, "Wie Architektur agile Zusammenarbeit fördert oder behindert", OBJEKTSpektrum 01/2018
PDCA	https://github.com/dirkengel/articles/blob/main/PDCAandTheForgottenStakeholders.pdf (2023/03/19)
people skills	https://www.oreilly.com/ideas/4-essential-skills-software-architects-need-to-have-but-ofen-dont (2019/01/04)
platform	Klaus Pohl et al., "Software Product Line Engineering", Springer, 2005, ISBN 978-3540243724
principle	https://dictionary.cambridge.org/dictionary/english/principle (2019/01/07)
process definition	https://en.wikipedia.org/wiki/ISO/IEC_15504 (2019/01/14)
RASIC	https://en.wikipedia.org/wiki/Responsibility_assignment_matrix#RASCI (2022/11/07)
refactoring (patterns)	Martin Fowler, "Refactoring", Addison-Wesley, 1999, ISBN 0-201-48567-2
relationship	https://www.collinsdictionary.com/de/worterbuch/englisch/relationship (2019/01/07)
RFC2119	https://www.ietf.org/rfc/rfc2119.txt (2019/01/14)
SEI views	https://resources.sei.cmu.edu/library/asset-view.cfm?assetid=484159 (2022/05/14)
SOLID	https://en.wikipedia.org/wiki/SOLID (2019/01/14)
SW architecture	https://www.iso.org/obp/ui/#iso:std:iso-iec-ieee:42010:ed-1:v1:en , section 3.2, (2022/05/14)
SWE.2	https://www.flecsim.de/images/download/AutomotiveSpiceShortened/Automotive%20Spice%203.1/SWE.2.html (2022/10/26)
SWE.5	https://www.flecsim.de/images/download/AutomotiveSpiceShortened/Automotive%20Spice%203.1/SWE.5.html (2022/10/26)
system	https://www.merriam-webster.com/dictionary/system (2019/01/07)
tactics	Len Bass et al. "Software Architecture in Practice", Addison-Wesley, 4 th ed., 2021.
team	Thorsten Janning, "Scaling Agility: Wie führt man 100 agile Teams?" OBJEKTSpektrum, Ausgabe Agility/2014
test coverage	Peter Liggesmeyer, "Software-Qualität", Spektrum Akad. Verlag 2002, ISBN 3-8274-1118-1
tragedy of the commons	https://en.wikipedia.org/wiki/Tragedy_of_the_commons (2020/12/26)
unknown unknowns	https://www.researchgate.net/publication/27293624_The_Five_Orders_of_Ignorance (2022/10/26)
value stream	https://www.scaledagileframework.com/value-streams/ (2022/11/19)
why	Robert Cialdini, "Influence, New and Expanded: The Psychology of Persuasion", 2021.
WSJF	https://www.scaledagileframework.com/wsjf/ (2022/02/12)
XP	Kent Beck, "Extreme Programming Explained", Addison-Wesley, 2000, ISBN 0-201-61641-6