

Survey of software architecture V0.0

See book: <http://www.aosabook.org/en/index.html>

[Complete this form for on particular chapter of Brown/Wilson book]

[Do not copy the parts in square brackets]

[Some parts of this form may be difficult to complete]

[Total length 5 pages or less, plus one page for appendix]

[Complete all parts. Mark as INC (incomplete) if need be]

Name of system: [Give name of system, that is, book chapter, e.g. *Asterisk*]

Reviewer: [Give your name]

Date: [Date of writing survey]

Author of software: [Who did the initial design and/or implementation?]

Author of book chapter: [From Brown/Wilson book, e.g., *Russell Bryant*]

Five star rating of book chapter: [Choose one rating:

1 ***** Very valuable. Easy to follow

2 **** Good to read. Reasonably clear

3 *** Some good ideas. Reasonably clear

4 ** Some good ideas but not that easy to follow

5 * Not easy to follow]

Purpose of system: [About ½ page]

Basic metrics

KLOC: [Count comments & blank lines]

Project start-up: [When was project initiated?]

Number of major releases: [How many]

Number of developers: [Average]

Size of user community or number of installations:

Major stakeholders:

Use of concurrency: [If used, how used?]

Implementation language: [or languages]

Supporting software: [System relies extensively on what software?]

High level architecture

Diagram of software architecture

[At most one page]

[Box and arrow or wall of bricks. Clarify meaning of any arrows or box shapes]

High level scenarios

[One or two of these. Base on architecture diagram. Show large scale action of system.]

[Describe the flow]

Data structures or algorithms [Any that are important to the overall architecture]

Control flow and/or data key to the architecture if any

Architectural style: [Style or styles. What styles used in the software? How used?]

Major evolutionary changes: [If any. How has architecture changed over time?]

Performance bottlenecks: [What if any potential choke points?]

Real time: [Parts of system critical for fast enough response?]

Notation for architecture: [What notation(s) or what kind of diagram(s), if any, were used in describing or designing the software architecture]

Methodology: [What if any methodology was used in development, such as agile, clean room, RUP, spiral, waterfall, scrum, or “not clear”; see http://en.wikipedia.org/wiki/Software_architecture]

Appendix:

Kruchten's eight context attributes applied to Brown/Wilson systems

Kruchten attributes described in his slides 17-24 of

<https://files.me.com/philippe.kruchten/sbz0ma>

Also in: <https://files.me.com/philippe.kruchten/1q00nw>

[For each attribute, give a ranking, e.g., M for Medium.

[See Kruchten slide 27]

[Use "NA" for "not applicable. Use "UnK" for "Unknown"]

[Do not copy the parts in square brackets]

1. **Size:** [S=10KOC, M=100KLOC, L=1MLOC, XL=10MLOC]
2. **Criticality:** [Lo=e.g., game, Med=e.g., company critical, Hi=e.g. safely critical, XHi=disaster critical]
3. **Age of system:** [S=1yr, M=5yr, L=10yr, XL=20yr]
4. **Rate of change:** [Lo, Med, Hi]
5. **Business model:** [Commercial, bespoke, in-house, open source]
6. **Stable architecture:** [Lo=stable architecture, Med, Hi=major ongoing change]
7. **Team distribution:** [Lo=all in walking distance, Med=Occasional physical meetings, Hi=Meet only electronically, VH=Diff times zones or diff natural languages]
8. **Governance:** [Lo=Small intimate team, Med=Distinct design/testing groups, Hi=Distinct separate management and design teams, XHi=Formalized such as working to standards or precise specs]