

Principles of Distributed Agile Development

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ABSTRACT

Agile teams embrace change, companies today have agile teams running the software development process. The communication within the particular team is of utmost importance however how the agile team communicates with other agile teams is one of the most critical parts of developing a software. Team effectiveness depends upon trust between the small agile teams not only within the company environment but also between teams across different geographical locations, time zones and cultures [9]. As John Maxwell said "Team work makes the dream work", this same principle applies for agile teams within an organization.

KEYWORDS

agile, distributed teams, design, teamwork

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1 INTRODUCTION

Agile teams are most effective in small projects (<50 people) who have "easy access to user and business experts" and are developing non-safety critical projects [8]. However, to meet requirements for large scale projects a globalized approach with outsourced teams is becoming common [20] where different teams must work together cohesively, flexibly and rapidly to deliver a product that conforms to requirements specifications. In order for small team based agile practices to be effective in larger scale careful consideration must be given to the collaboration between teams and overall architecture. The following section 2.1 in Main side will cover the information about inter-team collaboration and section 2.2 will cover the importance of architectural design and architects in large-scale agile projects.

2 MAIN

2.1 Inter-team Collaboration

Traditional agile methodology emphasizes self-management[8], in a small team a team member is "cross-functional" and responsible

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for every phase in the agile development of the project. This type of management can be harmful larger projects where other teams working on the project may be in different countries subscribing to different standards of practice, languages and work cultures [20]. Large-scale projects also see a lot of specialization in different aspects from teams and as such strong cohesion between groups is a must. To achieve such strong cohesion a shared mental model (i.e. everyone has a similar understanding of the end result), trust and communication are necessary [13]. Dingsøyer and Moe advocated the establishment of a common set of values between the different teams through the use of workshops to get everyone to speak the "team's language"[8]. The workshops may also allow the members to gain shared knowledge network which is also crucial to the project. A shared knowledge network ensures that scrum members of different team know who to consult when changes need to be made and how changes made could affect the process as a whole. Since large-scale projects are interdisciplinary with specialists of varying kinds working on them it becomes essential to have a well-defined knowledge network.

Dingsøyr and Moe did not believe that Scrum methodology is suitable for large scale agile projects and other agile methodologies will need to be used, however the Sutherland et al. [20] points out that while Isolated Scrum methodology recommended by the Project Management Book of Knowledge, where individual teams do take part only one portion of the project with little to no communication with each other proves to be inefficient in large scale projects, the Distributed Scrum of Scrums approach supported by the Scrum Alliance and the Integrated Scrum model used by the SirsiDynix case study are both excellent models to use [20]. The integrated scrum model used by Sirsi is a modified version of the Distributed Scrum of Scrums, the Integrated model also consists of a main scrum where scrum masters of the different teams report to a Chief Scrum Master and a Chief Product Owner. Secondly to achieve synchronicity across the whole projects teams were spread across sites. This approach while originally may cause some issues will lead to a quick adjustment as it allows different individuals from different backgrounds to understand the work culture and expectations of the Chief Product Owner. Aside from these two major changes care was given to ensure that the six problems that plague Distributed development were handled properly through pre-agreed upon communications protocols (emails for stand-ups for example) and a standardized software and set of guidelines followed on all sites for process and project management. The case study thus proves that Scrum can indeed be used in large-scale distributed projects so long as "good engineering practices" are followed and a "strong central control" is maintained [20].

2.2 Architectural Design

In addition to specifying the *template style* to be used in formatting your work, there are a number of *template parameters* which modify

some part of the applied template style. A complete list of these parameters can be found in the *L^AT_EX User's Guide*.

Frequently-used parameters, or combinations of parameters, include:

- `anonymous, review`: Suitable for a “double-blind” conference submission. Anonymizes the work and includes line numbers. Use with the `\acmSubmissionID` command to print the submission's unique ID on each page of the work.
- `authorversion`: Produces a version of the work suitable for posting by the author.
- `screen`: Produces colored hyperlinks.

This document uses the following string as the first command in the source file: `\documentclass[sigconf, screen]{acmart}`.

3 MODIFICATIONS

Modifying the template — including but not limited to: adjusting margins, typeface sizes, line spacing, paragraph and list definitions, and the use of the `\vspace` command to manually adjust the vertical spacing between elements of your work — is not allowed.

Your document will be returned to you for revision if modifications are discovered.

4 TYPEFACES

The “acmart” document class requires the use of the “Libertine” typeface family. Your T_EX installation should include this set of packages. Please do not substitute other typefaces. The “lmodern” and “l^AT_EX” packages should not be used, as they will override the built-in typeface families.

5 TITLE INFORMATION

The title of your work should use capital letters appropriately — <https://capitalizemytitle.com/> has useful rules for capitalization. Use the `title` command to define the title of your work. If your work has a subtitle, define it with the `subtitle` command. Do not insert line breaks in your title.

If your title is lengthy, you must define a short version to be used in the page headers, to prevent overlapping text. The `title` command has a “short title” parameter:

```
\title[short title]{full title}
```

6 AUTHORS AND AFFILIATIONS

Each author must be defined separately for accurate metadata identification. Multiple authors may share one affiliation. Authors' names should not be abbreviated; use full first names wherever possible. Include authors' e-mail addresses whenever possible.

Grouping authors' names or e-mail addresses, or providing an “e-mail alias,” as shown below, is not acceptable:

```
\author{Brooke Aster, David Mehldau}
\email{dave, judy, steve@university.edu}
\email{firstname.lastname@phillips.org}
```

The `authornote` and `authornotemark` commands allow a note to apply to multiple authors — for example, if the first two authors of an article contributed equally to the work.

If your author list is lengthy, you must define a shortened version of the list of authors to be used in the page headers, to prevent

overlapping text. The following command should be placed just after the last `\author{}` definition:

```
\renewcommand{\shortauthors}{McCartney, et al.}
```

Omitting this command will force the use of a concatenated list of all of the authors' names, which may result in overlapping text in the page headers.

The article template's documentation, available at <https://www.acm.org/publications/proceedings-template>, has a complete explanation of these commands and tips for their effective use.

7 RIGHTS INFORMATION

Authors of any work published by ACM will need to complete a rights form. Depending on the kind of work, and the rights management choice made by the author, this may be copyright transfer, permission, license, or an OA (open access) agreement.

Regardless of the rights management choice, the author will receive a copy of the completed rights form once it has been submitted. This form contains L^AT_EX commands that must be copied into the source document. When the document source is compiled, these commands and their parameters add formatted text to several areas of the final document:

- the “ACM Reference Format” text on the first page.
- the “rights management” text on the first page.
- the conference information in the page header(s).

Rights information is unique to the work; if you are preparing several works for an event, make sure to use the correct set of commands with each of the works.

8 CCS CONCEPTS AND USER-DEFINED KEYWORDS

Two elements of the “acmart” document class provide powerful taxonomic tools for you to help readers find your work in an online search.

The ACM Computing Classification System — <https://www.acm.org/publications/class-2012> — is a set of classifiers and concepts that describe the computing discipline. Authors can select entries from this classification system, via <https://dl.acm.org/ccs/ccs.cfm>, and generate the commands to be included in the L^AT_EX source.

User-defined keywords are a comma-separated list of words and phrases of the authors' choosing, providing a more flexible way of describing the research being presented.

CCS concepts and user-defined keywords are required for all short- and full-length articles, and optional for two-page abstracts.

9 SECTIONING COMMANDS

Your work should use standard L^AT_EX sectioning commands: `section`, `subsection`, `subsubsection`, and `paragraph`. They should be numbered; do not remove the numbering from the commands.

Simulating a sectioning command by setting the first word or words of a paragraph in boldface or italicized text is **not allowed**.

10 TABLES

The “acmart” document class includes the “booktabs” package — <https://ctan.org/pkg/booktabs> — for preparing high-quality tables.

Table captions are placed *above* the table.

Table 1: Frequency of Special Characters

| Non-English or Math | Frequency | Comments |
|---------------------|-------------|-------------------|
| ∅ | 1 in 1,000 | For Swedish names |
| π | 1 in 5 | Common in math |
| \$ | 4 in 5 | Used in business |
| Ψ_1^2 | 1 in 40,000 | Unexplained usage |

Because tables cannot be split across pages, the best placement for them is typically the top of the page nearest their initial cite. To ensure this proper “floating” placement of tables, use the environment **table** to enclose the table’s contents and the table caption. The contents of the table itself must go in the **tabular** environment, to be aligned properly in rows and columns, with the desired horizontal and vertical rules. Again, detailed instructions on **tabular** material are found in the *L^AT_EX User’s Guide*.

Immediately following this sentence is the point at which Table 1 is included in the input file; compare the placement of the table here with the table in the printed output of this document.

To set a wider table, which takes up the whole width of the page’s live area, use the environment **table*** to enclose the table’s contents and the table caption. As with a single-column table, this wide table will “float” to a location deemed more desirable. Immediately following this sentence is the point at which Table 2 is included in the input file; again, it is instructive to compare the placement of the table here with the table in the printed output of this document.

11 MATH EQUATIONS

You may want to display math equations in three distinct styles: inline, numbered or non-numbered display. Each of the three are discussed in the next sections.

11.1 Inline (In-text) Equations

A formula that appears in the running text is called an inline or in-text formula. It is produced by the **math** environment, which can be invoked with the usual `\begin . . . \end` construction or with the short form `$. . . $`. You can use any of the symbols and structures, from α to ω , available in L^AT_EX [24]; this section will simply show a few examples of in-text equations in context. Notice how this equation: $\lim_{n \rightarrow \infty} x = 0$, set here in in-line math style, looks slightly different when set in display style. (See next section).

11.2 Display Equations

A numbered display equation—one set off by vertical space from the text and centered horizontally—is produced by the **equation** environment. An unnumbered display equation is produced by the **displaymath** environment.

Again, in either environment, you can use any of the symbols and structures available in L^AT_EX; this section will just give a couple of examples of display equations in context. First, consider the equation, shown as an inline equation above:

$$\lim_{n \rightarrow \infty} x = 0 \quad (1)$$

Notice how it is formatted somewhat differently in the **display-math** environment. Now, we’ll enter an unnumbered equation:

$$\sum_{i=0}^{\infty} x + 1$$

and follow it with another numbered equation:

$$\sum_{i=0}^{\infty} x_i = \int_0^{\pi+2} f \quad (2)$$

just to demonstrate L^AT_EX’s able handling of numbering.

12 FIGURES

The “figure” environment should be used for figures. One or more images can be placed within a figure. If your figure contains third-party material, you must clearly identify it as such, as shown in the example below.



Figure 1: 1907 Franklin Model D roadster. Photograph by Harris & Ewing, Inc. [Public domain], via Wikimedia Commons. (<https://goo.gl/VLCRBB>).

Your figures should contain a caption which describes the figure to the reader. Figure captions go below the figure. Your figures should **also** include a description suitable for screen readers, to assist the visually-challenged to better understand your work.

Figure captions are placed *below* the figure.

12.1 The “Teaser Figure”

A “teaser figure” is an image, or set of images in one figure, that are placed after all author and affiliation information, and before the body of the article, spanning the page. If you wish to have such a figure in your article, place the command immediately before the `\maketitle` command:

```
\begin{teaserfigure}
  \includegraphics[width=\textwidth]{sampleteaser}
  \caption{figure caption}
  \Description{figure description}
\end{teaserfigure}
```

Table 2: Some Typical Commands

| Command | A Number | Comments |
|----------------------|----------|------------------|
| <code>\author</code> | 100 | Author |
| <code>\table</code> | 300 | For tables |
| <code>\table*</code> | 400 | For wider tables |

13 CITATIONS AND BIBLIOGRAPHIES

The use of `BIBTEX` for the preparation and formatting of one's references is strongly recommended. Authors' names should be complete — use full first names (“Donald E. Knuth”) not initials (“D. E. Knuth”) — and the salient identifying features of a reference should be included: title, year, volume, number, pages, article DOI, etc.

The bibliography is included in your source document with these two commands, placed just before the `\end{document}` command:

```
\bibliographystyle{ACM-Reference-Format}
\bibliography{bibfile}
```

where “bibfile” is the name, without the “.bib” suffix, of the `BIBTEX` file.

Citations and references are numbered by default. A small number of ACM publications have citations and references formatted in the “author year” style; for these exceptions, please include this command in the **preamble** (before “`\begin{document}`”) of your `LATEX` source:

```
\citestyle{acmauthoryear}
```

Some examples. A paginated journal article [1], an enumerated journal article [7], a reference to an entire issue [6], a monograph (whole book) [23], a monograph/whole book in a series (see 2a in spec. document) [16], a divisible-book such as an anthology or compilation [11] followed by the same example, however we only output the series if the volume number is given [12] (so Editor00a's series should NOT be present since it has no vol. no.), a chapter in a divisible book [34], a chapter in a divisible book in a series [10], a multi-volume work as book [22], an article in a proceedings (of a conference, symposium, workshop for example) (paginated proceedings article) [3], a proceedings article with all possible elements [33], an example of an enumerated proceedings article [14], an informally published work [15], a doctoral dissertation [5], a master's thesis: [4], an online document / world wide web resource [2, 28, 35], a video game (Case 1) [27] and (Case 2) [26] and [25] and (Case 3) a patent [32], work accepted for publication [29], 'YYYYb'-test for prolific author [30] and [31]. Other cites might contain 'duplicate' DOI and URLs (some SIAM articles) [21]. Boris / Barbara Beeton: multi-volume works as books [18] and [17]. A couple of citations with DOIs: [19, 21]. Online citations: [35–37].

14 ACKNOWLEDGMENTS

Identification of funding sources and other support, and thanks to individuals and groups that assisted in the research and the preparation of the work should be included in an acknowledgment section, which is placed just before the reference section in your document.

This section has a special environment:

```
\begin{acks}
```

```
...
```

```
\end{acks}
```

so that the information contained therein can be more easily collected during the article metadata extraction phase, and to ensure consistency in the spelling of the section heading.

Authors should not prepare this section as a numbered or unnumbered `\section`; please use the “acks” environment.

15 APPENDICES

If your work needs an appendix, add it before the “`\end{document}`” command at the conclusion of your source document.

Start the appendix with the “appendix” command:

```
\appendix
```

and note that in the appendix, sections are lettered, not numbered. This document has two appendices, demonstrating the section and subsection identification method.

16 SIGCHI EXTENDED ABSTRACTS

The “sigchi-a” template style (available only in `LATEX` and not in Word) produces a landscape-orientation formatted article, with a wide left margin. Three environments are available for use with the “sigchi-a” template style, and produce formatted output in the margin:

- `sidebar`: Place formatted text in the margin.
- `marginfigure`: Place a figure in the margin.
- `marginfigure`: Place a table in the margin.

ACKNOWLEDGMENTS

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REFERENCES

- [1] [n. d.]. ([n. d.]).
- [2] Rafal Ablamowicz and Bertfried Fauser. 2007. CLIFFORD: a Maple 11 Package for Clifford Algebra Computations, version 11. Retrieved February 28, 2008 from <http://math.tntech.edu/rafal/cliff11/index.html>
- [3] Sten Andler. 1979. Predicate Path expressions. In *Proceedings of the 6th. ACM SIGACT-SIGPLAN symposium on Principles of Programming Languages (POPL '79)*. ACM Press, New York, NY, 226–236. <https://doi.org/10.1145/567752.567774>
- [4] David A. Anisi. 2003. *Optimal Motion Control of a Ground Vehicle*. Master's thesis. Royal Institute of Technology (KTH), Stockholm, Sweden.
- [5] Kenneth L. Clarkson. 1985. *Algorithms for Closest-Point Problems (Computational Geometry)*. Ph.D. Dissertation. Stanford University, Palo Alto, CA. UMI Order Number: AAT 8506171.
- [6] Jacques Cohen (Ed.). 1996. Special issue: Digital Libraries. *Commun. ACM* 39, 11 (Nov. 1996).
- [7] Sarah Cohen, Werner Nutt, and Yehoshua Sagie. 2007. Deciding equivalences among conjunctive aggregate queries. *J. ACM* 54, 2, Article 5 (April 2007), 50 pages. <https://doi.org/10.1145/1219092.1219093>
- [8] Torgeir DingsÅyrr and Nils Brede Moe. 2014. Towards Principles of Large-Scale Agile Development: A Summary of the workshop at XP2014 and a revised research agenda. (2014), 6. https://brage.bibsys.no/xmlui/bitstream/handle/11250/2472769/Towards+principles+of+large-scale+agile+development_postprint.pdf?sequence=2

- [9] Siva Dorairaj and James Noble. 2013. Agile Software Development with Distributed Teams: Agility, Distribution and Trust. (2013), 10. <https://ieeexplore-ieee-org.ezproxy1.lib.asu.edu/stamp/stamp.jsp?tp=&arnumber=6612873&tag=1>
- [10] Bruce P. Douglass, David Harel, and Mark B. Trakhtenbrot. 1998. Statecars in use: structured analysis and object-orientation. In *Lectures on Embedded Systems*, Grzegorz Rozenberg and Frits W. Vaandrager (Eds.). Lecture Notes in Computer Science, Vol. 1494. Springer-Verlag, London, 368–394. https://doi.org/10.1007/3-540-65193-4_29
- [11] Ian Editor (Ed.). 2007. *The title of book one* (1st. ed.). The name of the series one, Vol. 9. University of Chicago Press, Chicago. <https://doi.org/10.1007/3-540-09237-4>
- [12] Ian Editor (Ed.). 2008. *The title of book two* (2nd. ed.). University of Chicago Press, Chicago, Chapter 100. <https://doi.org/10.1007/3-540-09237-4>
- [13] Christoph Johann Stettina Finn Olav Bj  rnson, Julia Wijmaalen and Torgeir Dings  yr. 2018. Inter-team Coordination in Large-Scale Agile Development: A Case Study of Three Enabling Mechanisms. (2018), 16. https://www.researchgate.net/publication/325188087_Inter-team_Coordination_in_Large-Scale_Agile_Development_A_Case_Study_of_Three_Enabling_Mechanisms
- [14] Matthew Van Gundy, Davide Balzarotti, and Giovanni Vigna. 2007. Catch me, if you can: Evading network signatures with web-based polymorphic worms. In *Proceedings of the first USENIX workshop on Offensive Technologies (WOOT ’07)*. USENIX Association, Berkley, CA, Article 7, 9 pages.
- [15] David Harel. 1978. *LOGICS of Programs: AXIOMATIC and DESCRIPTIVE POWER*. MIT Research Lab Technical Report TR-200. Massachusetts Institute of Technology, Cambridge, MA.
- [16] David Harel. 1979. *First-Order Dynamic Logic*. Lecture Notes in Computer Science, Vol. 68. Springer-Verlag, New York, NY. <https://doi.org/10.1007/3-540-09237-4>
- [17] Lars H  rmander. 1985. *The analysis of linear partial differential operators. III*. Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences], Vol. 275. Springer-Verlag, Berlin, Germany. viii+525 pages. Pseudodifferential operators.
- [18] Lars H  rmander. 1985. *The analysis of linear partial differential operators. IV*. Grundlehren der Mathematischen Wissenschaften [Fundamental Principles of Mathematical Sciences], Vol. 275. Springer-Verlag, Berlin, Germany. vii+352 pages. Fourier integral operators.
- [19] IEEE. 2004. IEEE TCSC Executive Committee. In *Proceedings of the IEEE International Conference on Web Services (ICWS ’04)*. IEEE Computer Society, Washington, DC, USA, 21–22. <https://doi.org/10.1109/ICWS.2004.64>
- [20] Jack Blount John Sutherland, Anton Viktorov and Nikolai Puntikov. 2007. Distributed Scrum: Agile Project Management with Outsourced Development Teams. (2007), 10. <https://www.computer.org/csdl/proceedings/hicss/2007/2755/00/27550274a.pdf>
- [21] Markus Kirschmer and John Voight. 2010. Algorithmic Enumeration of Ideal Classes for Quaternion Orders. *SIAM J. Comput.* 39, 5 (Jan. 2010), 1714–1747. <https://doi.org/10.1137/080734467>
- [22] Donald E. Knuth. 1997. *The Art of Computer Programming, Vol. 1: Fundamental Algorithms (3rd. ed.)*. Addison Wesley Longman Publishing Co., Inc.
- [23] David Kosior. 2001. *Understanding Policy-Based Networking* (2nd. ed.). Wiley, New York, NY.
- [24] Leslie Lamport. 1986. *  T  X: A Document Preparation System*. Addison-Wesley, Reading, MA.
- [25] Newton Lee. 2005. Interview with Bill Kinder: January 13, 2005. Video. *Comput. Entertain.* 3, 1, Article 4 (Jan.-March 2005). <https://doi.org/10.1145/1057270.1057278>
- [26] Dave Novak. 2003. Solder man. Video. In *ACM SIGGRAPH 2003 Video Review on Animation theater Program: Part I - Vol. 145 (July 27–27, 2003)*. ACM Press, New York, NY, 4. <https://doi.org/99.9999/woot07-S422>
- [27] Barack Obama. 2008. A more perfect union. Video. Retrieved March 21, 2008 from <http://video.google.com/videoplay?docid=6528042696351994555>
- [28] Poker-Edge.Com. 2006. Stats and Analysis. Retrieved June 7, 2006 from <http://www.poker-edge.com/stats.php>
- [29] Bernard Rous. 2008. The Enabling of Digital Libraries. *Digital Libraries* 12, 3, Article 5 (July 2008). To appear.
- [30] Mehdi Saeedi, Morteza Saheb Zamani, and Mehdi Sedighi. 2010. A library-based synthesis methodology for reversible logic. *Microelectron. J.* 41, 4 (April 2010), 185–194.
- [31] Mehdi Saeedi, Morteza Saheb Zamani, Mehdi Sedighi, and Zahra Sasanian. 2010. Synthesis of Reversible Circuit Using Cycle-Based Approach. *J. Emerg. Technol. Comput. Syst.* 6, 4 (Dec. 2010).
- [32] Joseph Scientist. 2009. The fountain of youth. Patent No. 12345, Filed July 1st., 2008, Issued Aug. 9th., 2009.
- [33] Stan W. Smith. 2010. An experiment in bibliographic mark-up: Parsing metadata for XML export. In *Proceedings of the 3rd. annual workshop on Librarians and Computers (LAC ’10)*, Reginald N. Smythe and Alexander Noble (Eds.), Vol. 3. Paparazzi Press, Milan Italy, 422–431. <https://doi.org/99.9999/woot07-S422>
- [34] Asad Z. Spector. 1990. Achieving application requirements. In *Distributed Systems* (2nd. ed.), Sape Mullender (Ed.). ACM Press, New York, NY, 19–33. <https://doi.org/10.1145/90417.90738>
- [35] Harry Thornburg. 2001. Introduction to Bayesian Statistics. Retrieved March 2, 2005 from <http://ccrma.stanford.edu/~jos/bayes/bayes.html>
- [36] TUG. 2017. Institutional members of the T  X Users Group. Retrieved May 27, 2017 from <http://www.tug.org/instmem.html>
- [37] Boris Veytsman. [n. d.]. acmart—Class for typesetting publications of ACM. Retrieved May 27, 2017 from <http://www.ctan.org/pkg/acmart>

A RESEARCH METHODS

A.1 Part One

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi
 malesuada, quam in pulvinar varius, metus nunc fermentum urna,
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A.2 Part Two

Etiam commodò feugiat nisl pulvinar pellentesque. Etiam auctor sodales ligula, non varius nibh pulvinar semper. Suspendisse nec lectus non ipsum convallis congrue hendrerit vitae sapien. Donec at laoreet eros. Vivamus non purus placerat, scelerisque diam eu, cursus ante. Etiam aliquam tortor auctor efficitur mattis.

B ONLINE RESOURCES

Nam id fermentum dui. Suspendisse sagittis tortor a nulla mollis, in pulvinar ex pretium. Sed interdum orci quis metus euismod, et sagittis enim maximus. Vestibulum gravida massa ut felis suscipit congue. Quisque mattis elit a risus ultrices commodo venenatis eget dui. Etiam sagittis eleifend elementum.

Nam interdum magna at lectus dignissim, ac dignissim lorem rhoncus. Maecenas eu arcu ac neque placerat aliquam. Nunc pulvinar massa et mattis lacinia.