Requirements Handbook Companion

Table of Contents

1. Disclaimer	1
2. Context	2
3. Overview of the method	2
3.1. Overall structure	2
3.2. Links between the four PEGS	2
3.3. The lifecycle model	3
4. Case studies	
5. Book templates	
References	
Appendices	
Appendix A: Useful links	
Appendix B: Specific implementations	5
Appendix C: Checks results and issues	6

1. Disclaimer



Work in progress!

Here is a list of warnings:

- This work is in progress and subject to constant improvements, so pay attention to dates and versions.
- If you read the PDF version of this material on a browser, the links might not be clickable. Download it instead in your machine and open it with a PDF viewer. The links should be clickable there.

Conventions for this book:

Table 1. Icons signification

Icon	Signification
\otimes	A precisely referenced requirement this section is satisfying
ЭŘ.	A precisely referenced requirement this section is related to
⊗	No corresponding requirement for this section (should be fixed)

2. Context

This repository constitutes the companion of the book: Handbook of requirements and business analysis. It serves as the basis for the future Handbook's site: http://requirements-handbook.org/

3. Overview of the method



Work in progress!

This chapter is an overview of PEGS. Its aims at making this companion book self-content. We highly recommend, for more details and a full description of the subtleties of PEGS, to read the corresponding handbook.



Figure 1. The PEGS logo

3.1. Overall structure

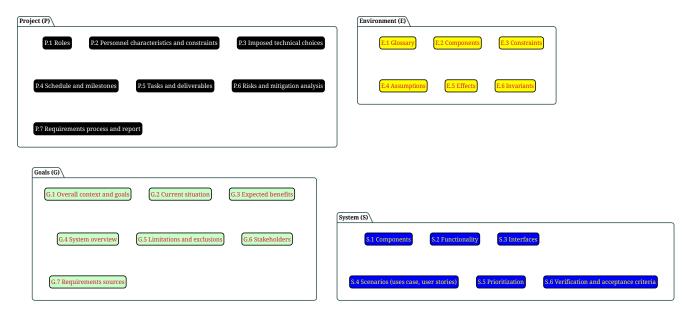


Figure 2. The four books of requirements

3.2. Links between the four PEGS

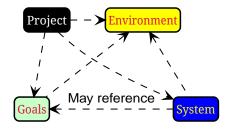


Figure 3. Reference links

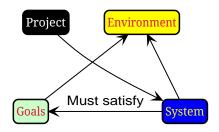


Figure 4. Verification obligations

3.3. The lifecycle model

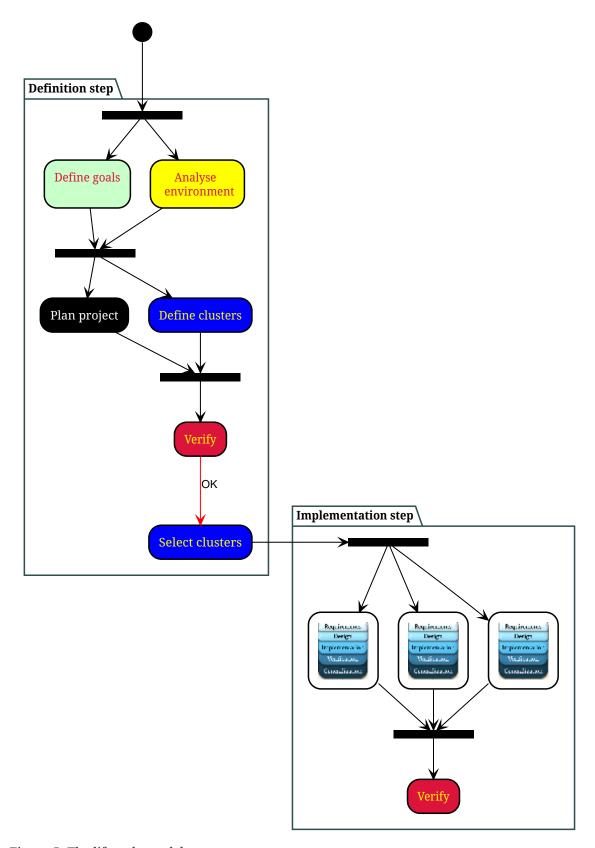


Figure 5. The lifecycle model

4. Case studies

We illustrate the use of PEGS through the following case studies:



Work in progress

- 1. The Roborace (see the dedicated repo here)
- 2. A more information-system-oriented example (one option is this library example)
- 3. This Companion Book' requirements (see the dedicated repo here)

5. Book templates

We provide a set of Book templates in this companion web site to help you apply PEGS and organize your requirements. Here is the list of the available templates (feel free to contribute by submitting additional templates):



Work in progress

- 1. DOCX
- 2. Google Doc (see this example for now)
- 3. LaTeX (see IEEE example)
- 4. GitHub
- **⊘** Corresponding Requirement

This section satisfies this requirement.

References

- Sommerville & Sawyer
- Axel van Lamsweerde
- Klaus Pohl

Appendices

Appendix A: Useful links

- The draft of the Method Book: PDF
- The draft of the Companion Book: Google Doc

Appendix B: Specific implementations

Here is a list of potential mappings between the PEGS:

SysML

- Each PEGS could be a package
- Requirements could be stereotyped (e.g., [Goals] or [System])

FORM-L

• M. Thuy could be interested in providing a template for the PEGS in Form-L

RSML

• Florian could integrate the PEGS in the editor

Appendix C: Checks results and issues

URLs

```
Sam 20 fév 2021 15:21:51 CFT
FILE: README.adoc
[]] http://se.ethz.ch/~meyer/down/requirements_handbook/REQUIREMENTS.pdf
[~] http://requirements-handbook.org/
https://docs.google.com/document/d/1HrWCRzyW_iTf1QXFFzEoDvvc66IzMCDb3uXGS5GRWz8/edit?u
sp=sharing
[1] https://github.com/FormalRequirements/requirements-handbook-companion
[1] https://FormalRequirements.github.io/requirements-handbook-companion
[0] https://formalrequirements.github.io/companionRequirements
[] https://gist.github.com/rxaviers/7360908
[I] https://github.com/FormalRequirements/requirements-handbook-
companion/workflows/Check%20URLs/badge.svg
[D] https://github.com/FormalRequirements/requirements-handbook-companion/actions
[1] https://img.shields.io/badge/License-MIT-yellow.svg
[D] https://opensource.org/licenses/MIT
[D] https://img.shields.io/badge/Gitpod-ready--to--code-blue?logo=gitpod
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companion
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[I] https://github.com/FormalRequirements/requirements-handbook-
companion/blob/main/README.pdf
[1] https://github.com/FormalRequirements/roboraceRequirements
[I] https://github.com/ddd-by-examples/library?ref=hackernoon.com#domain-description
[1] https://github.com/FormalRequirements/companionRequirements
[D] https://github.com/jpeisenbarth/SRS-Tex
[I] https://github.com/FormalRequirements/requirements-handbook-
companion/blob/main/check-results.txt
FILE: githubImpl.adoc
[D] http://se.ethz.ch/~meyer/down/requirements_handbook/REQUIREMENTS.pdf
[]] http://requirements-handbook.org/
https://docs.google.com/document/d/1HrWCRzyW_iTf1QXFFzEoDvvc66IzMCDb3uXGS5GRWz8/edit?u
sp=sharing
[] https://github.com
FILE: overview.adoc
[I] http://se.ethz.ch/~meyer/down/requirements_handbook/REQUIREMENTS.pdf
[/] http://requirements-handbook.org/
https://docs.google.com/document/d/1HrWCRzyW_iTf1QXFFzEoDvvc66IzMCDb3uXGS5GRWz8/edit?u
sp=sharing
3 links checked.
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