PIANOS conclusion document

Group Linja

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Software Engineering Project

UNIVERSITY OF HELSINKI
Department of Computer Science

Course

581260 Software Engineering Project (6 cr)

Project Group

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Contents

1 Introduction

This is a conclusion document that details the products and other results of the PIANOS project. This document effectively ends the project. In this document the project schedule is outlined and compared to the actual realized schedule. The working hours used for the project are summarized and a final report of realized risks is compared to the risk assessment done in the early phases of the project. Finally, project members write a little on lessons learned during the project.

1.1 Version history

Version	Date	Modifications
0.2	26.08.2005	Document template
1.0	30.08.2005	First full-featured draft
1.1	31.08.2005	Reviewed and corrected final

2 Schedule review

2.1 Milestones

This chapter represents the estimated dates and the correct dates of the products (documents and the software).

Deliverable	**Estimated date**	**Correct date**
Project plan (final)	27.5.	27.5.
Software requirements specification	17.6.	21.6.
Software design document	22.7.	3.8.
Software product (executable version)	19.8.	around 16.8.
Software product (a version working correctly)	-	28.8.
Implementation document	-	30.8.
Manual	-	25.8.
Testing document	-	30.8.
Final software product (release)	2.9	2.9.

3 Working hour reports

Statistics

Week	Group members	Total working hours	Avg. hours per person
1	5	65	13
2	5	79	16
3	4	56	14
4	4	73	18
5	4	65	16
6	4	53	13
7	4	56	14
8	4	82	21
9	3	80	27
10	3	62	21
11	3	60	20
12	3	66	22
13	3	75	25
14	3	?	?
Total		?	?

The working hour listings are included as an appendix.

4 Products

This section describes the products of the project and their sizes.

4.1 Documents

Document name	Pages
Project plan	25
Requirements specification	36
Design document	70
User manual	34
Implementation document	49
Testing document	76
Conclusion document	?

4.2 Executable prototypes

Model name	Lines of code
The simple bird model	1049
Spatial bird model with spatial dependence	1003

Before these, two other prototypes were made but they had no semantic background and therefore didn't produce any results.

4.3 Final program source code

Package name	Lines of code	Executable lines of code
PIANOS.exceptions	67	12
PIANOS	315	169
PIANOS.datastructures	1728	612
PIANOS.io	2192	1074
PIANOS.generator	3572	1963

Total lines of code: 7874

Total executable lines of code: 3831 (not including: comment lines, empty lines, curly bracket lines)

5 Risk review

This section presents the risks described in Project plan and their final status, that is, whether the risk has realized or not.

The fields of the following table:

- Risk name: a short description of the risk also found in the project plan
- Probability: the estimated likelihood of the risk coming true, on a scale of 'Low, Moderate, High'.
- Seriousness: an estimate of impact on the project, 'High' being the most serious, 'Moderate' and 'Low' the other choices.
- Final status: this is the risk's status at the end of the project

Risk name	Probability	Seriousness	Final status
Temporary loss of work force	High	Low	Realized
Permanent loss of work force	Low	High	Realized - twice
CS network failure	Moderate	Moderate	Realized
Loss of project data	Moderate	Moderate	Not realized
A part of the project is delayed	Moderate	High	Realized
Schedule pressure	Moderate	Moderate	Realized
Evolution of requirements	Low	High	Not realized
Over-planning	Moderate	Moderate	Not realized
Over-prototyping	Moderate	Moderate	Not realized
Harder than expected	Moderate	Moderate	Not realized
The problem is more extensive than expected	Moderate	High	Not realized
Incompatibility	Moderate	High	Not realized
Fortran issues	Moderate	High	Realized to some extent
Mis-implementation	Moderate	High	Cannot be determined
Wrong approach	Moderate	High	Cannot be determined
Lack of technical specification	Moderate	Moderate	Not realized

There were no realized risks that were not found out at the project planning phase.

6 Lessons learned during the project

This section contains the experiences of the project members on the project as they have written them.

6.1 Eemil Lagerspetz

In my eyes, the significance of planning has increased as a result of this project. I used to plan only the big ideas very quickly and then program as I thought was appropriate, but in this project we designed in detail and then the implementation could follow the design closely, only a few places needed modifications. I was also suprised that the use of CVS, LaTeXand development environments can make projects like this so much easier. After using CVS I cannot think that the project could have beed done without a versioning management system.

6.2 Marja Hassinen

Project phases

After the Software Engineering course I had a vague picture of project phases but during this project the picture got clearer. Now I know not only what the purpose of each phase is but also the activities included in each phase.

Documents: what to write

At the beginning of the cource one of my goals was to learn to write documents and to know, what kind of things the documents should include. During the course I got a clearer view of the documents that should be written during a software project.

Design: what it is

Before this project I had programmed only small applications and it hadn't been necessary to design them. At the Software Engineering course there were only a couple of illustration techiniques presented, but I didn't got a very explicit idea of what design really is. During this project I learned what kind of activities can be done at the design phase and how the ideas about the program get clearer step by step and can be represented to other people.

The problem domain

- Bayesian models: Before this course I knew the basics of Bayesian models but during the course I learned why they are useful and what kind of things can be represented with them.
- Spatial dependencies: During the course I learned what kind of things can be represented with spatial models and what kind of difficulties arise from spatial dependencies.

- The Metropolis-Hastings algorithm: I have learned how this algorithm works and how to program programs that utilize it.
- The models: I had heard about “the bird model” - now I know what it means.

Fortran

During the project I learned the basics of Fortran. It is quite different from the other programming languages I had used.

Tools

The CVS and LateX tools are handy when working as a team with other people. It was very useful to get to know them.

6.3 Joonas Kukkonen

The greatest lesson for me was how to make a larger programs in a group. The course also gave me insights how important a good software engineering process is. I liked the role of project leader and it taught me, among other things, how to plan and lead meetings.

The software engineering course left the project phases and the documenting a little bit unclear. The project clarified these phases, especially requirement analysis and design. I have learned to write better documents and working on the documents has also improved my writing skills in English. The problem domain has taught me about Bayesian models and modeling of real life phenomenon. It has also let me see what kind of problems the researchers work with.

I have never done any prototypes and so at the start I underestimated the value of making them. The project showed how important and helpful making prototypes can be under right circumstances. During the project I learned to use CVS, Latex and some other helpful programs.

7 References

Appendix 1. Working hour lists

The categories used at the lists are the following:

PROJ : Project planning REQU : Requirements analysis DESI : Design IMPL : Implementation TEST : Testing OTPR : Other products MEET : Meetings INST : Installation and maintenance procedures KNOW : Get-to-know the problem scope and environment OTHE : Other tasks USIN : User interface design

Marja Hassinen

17.5.2005	INST	3.5	Studying Fortran
17.5.2005	MEET	1.0	Meeting with the project group
17.5.2005	INST	0.5	Studying how to use CVS
17.5.2005	INST	0.5	Writing content to the web page
18.5.2005	INST	2.0	Studying Fortran
18.5.2005	OTHE	0.5	Reading project instructions
19.5.2005	MEET	2.5	Meeting with the project group
19.5.2005	PROJ	0.5	Writing about listing the working hours
19.5.2005	INST	0.5	Studying how to use CVS
19.5.2005	INST	0.5	Studying how to use the report.pl-script
19.5.2005	INST	1.0	Studying how to use LaTeX
19.5.2005	PROJ	1.0	Writing the project plan (Project organization)
20.5.2005	PROJ	1.0	Writing the project plan (Schedule)
20.5.2005	MEET	2.5	Meeting with the client and the project group
23.5.2005	MEET	2.0	Meeting with the project group
23.5.2005	PROJ	1.0	Writing the project plan (Schedule)
23.5.2005	INST	0.5	Studying how to use LaTeX
23.5.2005	REQU	1.0	Reading the IEEE SRS document
24.5.2005	MEET	2.0	Meeting with the client and the project group
24.5.2005	INST	1.0	Studying Fortran
25.5.2005	MEET	2.0	Meeting with the project group
25.5.2005	MEET	0.5	Writing notes of the meating into a file
25.5.2005	PROJ	0.5	Writing the project plan
26.5.2005	INST	2.0	Studying Fortran
27.5.2005	PROJ	1.0	Reading the project plan and marking errors
27.5.2005	MEET	2.0	Meeting with the project group (reviewing the project plan)
27.5.2005	PROJ	0.5	Correcting grammatical mistakes of the plan (with Eemil)
29.5.2005	REQU	0.5	Preparing the next meeting
29.5.2005	KNOW	0.5	Reading about Markov random fields
30.5.2005	MEET	2.0	Meeting with the project group and the client
30.5.2005	PROJ	1.5	Reading about the FP method and calculating FP's
31.5.2005	REQU	2.0	Specifying requirements with the project group
31.5.2005	REQU	1.5	Writing the SRS (data & simulation)
1.6.2005	MEET	2.0	Meeting with the project group
1.6.2005	REQU	1.0	Writing the SRS
1.6.2005	INST	0.5	Studying Fortran
2.6.2005	MEET	2.0	Meeting with the group and the client
2.6.2005	REQU	1.0	Writing the SRS (adding requirements)
3.6.2005	INST	2.0	Studying Fortran

4.6.2005	INST	1.0	Studying Fortran
5.6.2005	REQU	0.5	Writing the SRS (Glossary)
6.6.2005	REQU	2.0	Writing the SRS (Glossary & Requirements)
6.6.2005	MEET	2.0	Meeting with the group and the client
7.6.2005	REQU	2.0	Specifying requirements with the project group
7.6.2005	REQU	2.5	Writing the SRS (Requirements)
8.6.2005	MEET	2.0	Meeting with the project group (requ..)
8.6.2005	REQU	1.5	Writing the SRS (Requ & Gloss)
9.6.2005	MEET	2.0	Meeting with the project group and the client
9.6.2005	REQU	1.0	Writing the SRS (correcting errors)
10.6.2005	MEET	2.0	Meeting with the project group
10.6.2005	REQU	0.5	Correcting errors in SRS
13.6.2005	MEET	2.0	Meeting with the group
13.6.2005	OTHE	0.5	Reporting working hours (statistics, metrics system)
13.6.2005	REQU	1.0	Writing the SRS
13.6.2005	INST	0.5	Studying Fortran
14.6.2005	DESI	0.5	Designing the simulation parameter input form
14.6.2005	OTHE	0.5	Reporting working hours (problems with the system)
14.6.2005	MEET	2.0	Meeting with the project group
14.6.2005	REQU	1.0	Reading the SRS
14.6.2005	DESI	0.5	Reading the IEEE SDD document
15.6.2005	MEET	1.0	Meeting with the project group
15.6.2005	DESI	1.0	Designing the simtech input formats with Eemil
15.6.2005	DESI	0.5	Reading the IEEE SDD document
15.6.2005	DESI	0.5	Designing the simtech input formats
16.6.2005	DESI	1.0	Designing the simtech input formats
16.6.2005	INST	1.5	Studying Fortran
17.6.2005	MEET	2.0	Review (SRS)
17.6.2005	REQU	1.0	Correcting errors in SRS
20.6.2005	DESI	1.0	Reading & designing the simtech input formats
20.6.2005	INST	1.0	Studying Fortran
20.6.2005	MEET	2.0	Meeting with the project group
21.6.2005	DESI	4.0	Designing the prototype (with Eemil)
21.6.2005	DESI	1.0	Designing the prototype
21.6.2005	INST	0.5	Studying Fortran
22.6.2005	INST	1.0	Studying Fortran
22.6.2005	DESI	0.5	Designing the prototype
22.6.2005	MEET	2.0	Meeting with the project group
23.6.2005	DESI	4.0	Designing & coding the prototype (with Eemil)
27.6.2005	DESI	1.0	Designing the prototype (pictures and some minor changes)
27.6.2005	DESI	1.0	Reading about NAG and finding some routines
27.6.2005	MEET	2.0	Meeting with the project group
27.6.2005	DESI	0.5	Reading notes etc.
28.6.2005	DESI	4.0	Designing & coding the prototype (with Eemil)
29.6.2005	DESI	1.5	Writing the design document
29.6.2005	MEET	2.0	Meeting with the project group
29.6.2005	DESI	1.0	Coding the prototype (with Eemil)
30.6.2005	DESI	2.0	Coding the prototype
1.7.2005	MEET	2.0	Meeting with the project group

18.7.2005	OTHE	0.5	Miscellaneous
18.7.2005	DESI	1.0	Coding & documenting the prototype
18.7.2005	INST	0.5	Studying Fortran
18.7.2005	MEET	2.0	Meeting with the project group
18.7.2005	DESI	1.0	Discussing the protype & designing the generator: probabilities
19.7.2005	DESI	2.0	Writing the design document (probabilities) at school
19.7.2005	DESI	1.5	Writing the design document (probabilities) at home
19.7.2005	INST	1.0	Reading about NAG and trying to get it work
20.7.2005	MEET	0.5	Meeting with the client
20.7.2005	DESI	1.0	Coding the prototype (with Eemil)
20.7.2005	MEET	2.5	Meeting with the project group
20.7.2005	DESI	1.0	Reading and writing the design document
20.7.2005	DESI	0.5	Discussing the linking
20.7.2005	DESI	0.5	Writing the design document (linking)
21.7.2005	DESI	0.5	Creating prototype definition files (model, simtech parameters, data)
21.7.2005	DESI	3.0	Coding the prototype & writing the design document, discussing design (at school)
21.7.2005	DESI	2.0	Correcting errors in prototype (problems with NAG)
22.7.2005	MEET	2.0	Meeting with the project group
22.7.2005	DESI	1.5	Debugging the prototype (it works!)
22.7.2005	DESI	3.0	Writing the design document
25.7.2005	DESI	1.0	Reading the design document
25.7.2005	MEET	1.0	Meeting with the project group
25.7.2005	DESI	2.0	Writing the design document (model desciption language) at school
25.7.2005	DESI	1.0	Writing the design document at home
25.7.2005	TEST	1.0	Reading and writing the testing document
26.7.2005	TEST	0.5	Discussing testing.
26.7.2005	DESI	1.0	Discussing design and reading and writing the design document.
26.7.2005	IMPL	1.0	Discussing implementation and writing Distribution.java.
26.7.2005	IMPL	0.5	Writing Distribution.java (finished).
26.7.2005	DESI	0.5	Reading the design document
27.7.2005	MEET	1.0	Meeting with the project group
27.7.2005	DESI	1.0	Correcting error in Design document
27.7.2005	IMPL	1.0	Implementing Distribution subclasses
27.7.2005	IMPL	1.5	Implementing Distribution subclasses and Variable setters
27.7.2005	INST	0.5	Installing Java 1.5 and reading about the new features
28.7.2005	IMPL	2.5	Implementing Distribution subclasses
28.7.2005	TEST	0.5	Trying to unit test Distribution subclasses (problems with everything)
28.7.2005	TEST	0.5	Unit testing Distribution subclasses (seems ok)
28.7.2005	IMPL	0.5	Discussing implementation and adding features to DistributionFactory

29.7.2005	MEET	1.0	Meeting with the project group
29.7.2005	IMPL	2.0	Correcting miscellaneuous errors in data structures and implementing generateAcceptationFormula
29.7.2005	IMPL	2.0	Implementing generateAcceptationFormula
31.7.2005	IMPL	1.5	Implementing generateAcceptationFormula
1.8.2005	IMPL	0.5	Implementing generateUpdateFunctionalCode
1.8.2005	MEET	1.0	Meeting with the project group
1.8.2005	IMPL	1.0	Implementing generateUpdateFunctionalCode
1.8.2005	IMPL	1.5	Implementing generateUpdateFunctionalCode
2.8.2005	DESI	1.5	Reading the design document and discussing the FTR
2.8.2005	IMPL	1.0	Implementing generateUpdateFunctionalCode
2.8.2005	TEST	1.0	Writing a test program for generateAcceptationFormula (problems with other modules)
3.8.2005	IMPL	1.0	Adding features to generateFunctionalNewValuesCode
3.8.2005	MEET	1.0	FTR for design document
3.8.2005	DESI	0.5	Correcting errors in design document
3.8.2005	IMPL	1.0	Discussing implementation and testing
3.8.2005	TEST	1.0	Testing generateAcceptationFormula and correcting bugs.
4.8.2005	IMPL	1.0	Correcting errors in generateAcceptationFormula
4.8.2005	TEST	1.0	Testing generateAcceptationFormula
4.8.2005	TEST	1.0	Testing generateFunctionalNewValuesCode and correcting errors
4.8.2005	IMPL	0.5	Adding features to generateFunctionalNewValuesCode
4.8.2005	IMPL	0.5	Discussing implementation
4.8.2005	IMPL	0.5	Changing distributions and generator to utilize ArrayList<String>s.
5.8.2005	MEET	1.5	Meeting with the project group
5.8.2005	TEST	0.5	Testing the generateFunctionalNewvaluesCode
5.8.2005	IMPL	1.5	Discussing implementation, adding features to prototype, adding new methods.
7.8.2005	IMPL	1.5	Implementing generateProposal
8.8.2005	IMPL	1.0	Implementing generateNewValueCode and generateAcceptationCode
8.8.2005	MEET	1.5	Meeting with the project group
8.8.2005	IMPL	1.5	Refactoring generateAcceptationFormula and the methods it uses
8.8.2005	IMPL	1.0	Refactoring generateAcceptationFormula and generateNewValuesFunctionalCode
9.8.2005	IMPL	1.5	Implementing generateNewValuesFunctionalCode and the methods it uses
9.8.2005	IMPL	0.5	Correcting errors in generator classes
9.8.2005	TEST	0.5	Generating test cases and testing generateAcceptationFormula (doesn't work)
9.8.2005	IMPL	1.0	Correcting errors in generateAcceptationFormula
9.8.2005	IMPL	0.5	Implementing generateAcceptationCode
10.8.2005	IMPL	2.0	Correcting miscellaneous programming errors in Generator (now it can be compiled but not yet run)
10.8.2005	OTHE	2.0	Attending the lecture about testing

11.8.2005	MEET	2.0	Meeting with the project group
11.8.2005	IMPL	2.0	Discussing implementation and implementing Output
12.8.2005	IMPL	2.0	Implementing Output
12.8.2005	IMPL	0.5	Correcting miscellaneous programming errors in Generator (now it can be run.. wow!)
12.8.2005	TEST	0.5	Testing the generator
15.8.2005	IMPL	1.0	Correcting errors in Output and Proposal. Writing javadoc comments.
15.8.2005	TEST	1.0	Writing the testing document (test models etc.) and thinking about testing
15.8.2005	TEST	0.5	Trying to get the produced Fortran code to compile
15.8.2005	MEET	3.0	Meeting with the project group
15.8.2005	TEST	0.5	Hunting a Mysterious Bug
15.8.2005	IMPL	0.5	Correcting the Mysterious Bug
16.8.2005	IMPL	0.5	Refining the generateWriteOutput class
16.8.2005	TEST	0.5	Writing testing document (models)
16.8.2005	TEST	2.5	Testing Acceptation, writing the testing document (at school)
16.8.2005	TEST	1.0	Testing Acceptation, writing the testing document (at home)
17.8.2005	TEST	1.0	Testing Acceptation, writing the testing document (at home)
17.8.2005	TEST	2.0	Testing Acceptation, writing the testing document (at home)
17.8.2005	TEST	1.0	Discussing miscellaneous errors and features recently found and correcting them
18.8.2005	MEET	2.0	Meeting with the project group
22.8.2005	OTHE	0.5	Reading e-mail and generating the week report.
23.8.2005	OTHE	1.0	Reading the manual
23.8.2005	TEST	1.0	Reading the source code (Acceptation) and discussing found bugs and other implementation things
23.8.2005	MEET	3.0	Meeting with the project group
23.8.2005	TEST	0.5	Reading the generated source code for cancer model and looking for bugs. Didn't find any.
23.8.2005	IMPL	0.5	Adding features and discussing implementation (problems with functional parameters - again)
24.8.2005	TEST	0.5	Testing Acceptation with cancer model
24.8.2005	TEST	3.0	Testing Acceptation with model_all_func
24.8.2005	OTPR	1.0	Correcting errors in the manual (problems with cvs and everything), discussing the CD, viewing its contents
24.8.2005	TEST	0.5	Testing Acceptation and discussing its implementation
25.8.2005	TEST	1.5	Testing Acceptation with the spatial case and writing the testing document
25.8.2005	OTPR	0.5	Writing the manual and discussing the implementation document
25.8.2005	OTPR	0.5	Creating a user_dist.f90 to be delivered to the customer, reading documents
25.8.2005	TEST	1.0	Writing the testing document

26.8.2005	MEET	1.0	Meeting with the project group
26.8.2005	IMPL	2.5	Writing the implementation document (requirements & further development)
26.8.2005	OTPR	1.0	Writing the conclusion document (schedule, risks, products)
26.8.2005	TEST	0.5	Reading and writing the testing document
26.8.2005	OTPR	0.5	Writing the what have I learned thing
28.8.2005	IMPL	0.5	Writing the implementation document
28.8.2005	OTPR	0.5	Writing the conclusion document and what have I learned thing
28.8.2005	IMPL	0.5	Discussing implementation (efficiency issues) and reading the parser source code
28.8.2005	TEST	1.0	System testing with the bird model (the proposal distributions are so messed up that the program simply can't work)
29.8.2005	TEST	1.0	System testing with the bird model (added debug prints etc)
29.8.2005	MEET	1.0	Meeting with the project group
29.8.2005	IMPL	1.0	Writing the implementation document
29.8.2005	OTPR	0.5	Writing the conclusion document
30.8.2005	IMPL	0.5	Removing debug prints from the generator and correcting errors in the implementation document
30.8.2005	IMPL	1.0	Reading the implementation document
30.8.2005	TEST	0.5	Reading the testing document and the conclusion document
31.8.2005	MEET	1.5	Meeting with the project group
31.8.2005	IMPL	1.0	Correcting errors in the implementation document
31.8.2005	OTPR	1.0	Writing the conclusion document and the testing document
31.8.2005	OTPR	0.5	Inspecting the CD

Eemil Lagerspetz

17.05.2005	MEET	1.0	Official meeting
17.05.2005	INST	3.0	Project homepage, latex-install, CVS-install
17.05.2005	INST	1.0	TortoiseCVS-tutorial, etc
18.05.2005	INST	2.0	CVS and binary files, rewriting the tutorial
19.05.2005	MEET	2.5	Official meeting
19.05.2005	INST	2.0	reorganizing CVS among other things
19.05.2005	PROJ	3.0	Writing about the risks
19.05.2005	INST	1.0	Learning about LaTeX
20.05.2005	MEET	2.5	Official meeting
20.05.2005	PROJ	1.0	Writing about communication and data storage
23.05.2005	MEET	2.0	Official meeting
23.05.2005	PROJ	2.0	Writing parts of the planning document
24.05.2005	MEET	2.0	Official meeting
24.05.2005	PROJ	3.0	Discussing risks with the project manager
25.05.2005	MEET	2.0	Official meeting
25.05.2005	PROJ	1.0	Tweaking the risks
25.05.2005	PROJ	2.0	Adding more content to the risks
25.05.2005	INST	2.0	Configuring a backup CVS server for emergencies
27.05.2005	PROJ	1.0	Reading up for the review of the project plan
27.05.2005	PROJ	1.0	Correcting some errors in the project plan
27.05.2005	PROJ	0.5	Fixing grammatical errors in the project plan
30.05.2005	MEET	2.0	Official meeting
30.05.2005	PROJ	2.0	Writing about testing
31.05.2005	REQU	2.0	Meeting to discuss requirements and use cases
31.05.2005	REQU	1.0	Writing the first draft of the use cases
31.05.2005	REQU	3.0	Discussing and writing the requirements
01.06.2005	MEET	2.0	Official meeting
01.06.2005	REQU	2.0	Working on the use cases and requirements
02.06.2005	MEET	2.0	Official meeting
06.06.2005	MEET	2.0	Official meeting
06.06.2005	REQU	1.0	Adding requirement Stabilities and Ids
07.06.2005	REQU	2.0	Meeting on the srs
07.06.2005	REQU	4.0	Copying and styling diagrams for the srs
08.06.2005	MEET	2.0	Official meeting
08.06.2005	REQU	4.0	Drawing system models, writing glossary
09.06.2005	REQU	2.0	Meeting on the requirements
10.06.2005	MEET	2.0	Official meeting
11.06.2005	REQU	2.0	Redrawing diagrams, writing model description
13.06.2005	MEET	2.0	Official meeting
13.06.2005	REQU	2.0	modifying diagrams, fixing some srs errors
14.06.2005	DESI	2.0	Calculation example meeting
14.06.2005	REQU	1.0	Reading up for the SRS inspection
15.06.2005	MEET	2.0	Official meeting
17.06.2005	REQU	3.0	SRS document inspection

17.06.2005	REQU	2.0	Correcting the SRS
17.06.2005	DESI	2.0	Writing the design document
20.06.2005	MEET	2.0	Official meeting
21.06.2005	DESI	5.5	Designing the prototype, etc.
22.06.2005	MEET	2.0	Official meeting
23.06.2005	DESI	4.0	Designing the prototype
27.06.2005	MEET	2.0	Official meeting
27.06.2005	DESI	1.0	Meeting up with the customer about blocking
27.06.2005	DESI	1.0	Structuring up and modifying the design doc
28.06.2005	DESI	4.0	Designing the prototype, writing the dd
28.06.2005	DESI	6.0	Making the prototype runnable
29.06.2005	MEET	2.0	Official meeting
29.06.2005	DESI	1.0	Redesigning the prototype internals
29.06.2005	DESI	1.5	Fixing prototype bugs
01.07.2005	MEET	2.0	Official meeting
18.07.2005	MEET	2.0	Official meeting
19.07.2005	DESI	2.0	Designing at the department
19.07.2005	DESI	1.0	Designing at home
20.07.2005	DESI	0.5	Meeting on the prototype with the customer
20.07.2005	DESI	1.0	Modifying the prototype for the new model
20.07.2005	DESI	2.5	Design meeting
20.07.2005	INST	1.0	Implementing subsubsubsection
20.07.2005	DESI	1.0	Modifying the prototype
21.07.2005	DESI	3.0	Modifying the prototype
21.07.2005	DESI	0.5	Debugging the prototype
22.07.2005	MEET	2.0	Official meeting
22.07.2005	DESI	1.5	Debugging the prototype
22.07.2005	DESI	3.0	Writing the design document
23.07.2005	DESI	2.0	Writing the design document
25.07.2005	MEET	1.0	Meeting with the project group
25.07.2005	DESI	2.0	Designing the parser
25.07.2005	DESI	3.0	Designing the parser(at home)
26.07.2005	TEST	0.5	Discussing testing
26.07.2005	DESI	1.0	Discussing design, writing the design document
26.07.2005	IMPL	1.0	Discussing implementation and writing the parser
26.07.2005	DESI	2.0	Reading the design document for the review 27.07
27.07.2005	DESI	1.0	The review
27.07.2005	DESI	2.0	Correcting the SDD, writing the parser
27.07.2005	DESI	2.0	Correcting the SDD, writing the parser(at home)
28.07.2005	IMPL	6.0	Writing the parser and other classes
29.07.2005	DESI	1.0	Putting up stuff into the Design document
29.07.2005	IMPL	2.0	Implementing the Parser
29.07.2005	IMPL	2.5	Implementing the Parser(at home)
30.07.2005	IMPL	4.0	Implementing the Parser(at home)
31.07.2005	DESI	1.0	Reading the SDD for the review on 03.08
01.08.2005	MEET	2.0	Meeting with the project group
01.08.2005	IMPL	2.0	Implementing the Parser(at home)
02.08.2005	IMPL	4.0	Implementing the Parser and fixing bugs
02.08.2005	IMPL	3.0	Implementing the Parser and fixing bugs
03.08.2005	MEET	0.5	Official review of the SDD & meeting
03.08.2005	IMPL	1.5	Fixing bugs and tweaking the parser

03.08.2005	IMPL	1.0	Fixing bugs and tweaking the parser(at home)
04.08.2005	IMPL	3.0	Finishing the Parser and tweaking the prototype
05.08.2005	MEET	1.5	Meeting with the project group
05.08.2005	IMPL	1.5	Adding features to the prototype
05.08.2005	IMPL	3.0	Adding features to the prototype and Parser
08.08.2005	MEET	1.5	Meeting with the project group
08.08.2005	IMPL	1.5	Adding proposal strategy to the parser, repackaging
08.08.2005	IMPL	4.0	Fixing FortranWriter, implementing generateReadData
09.08.2005	MEET	1.0	Meeting with the customer about new example models
09.08.2005	IMPL	3.0	Writing Input.java
10.08.2005	OTHE	2.0	On Taina's testing lecture
10.08.2005	IMPL	4.0	Finishing Input, fixing FortranWriter indenting
11.08.2005	MEET	2.0	Meeting with the project group
11.08.2005	IMPL	3.0	Implementing the spatial part of Acceptation.java
12.08.2005	IMPL	2.0	Implementing generateSetFunctional
15.08.2005	MEET	3.0	Official meeting
15.08.2005	TEST	5.0	Writing the Testing document
16.08.2005	TEST	2.5	Meeting & Writing tests for parseVariable
16.08.2005	TEST	5.0	Writing tests for parseVariable and the testing doc
17.08.2005	TEST	2.0	Writing the testing document and discussing features
17.08.2005	TEST	5.0	Ironing out bugs and bettering Output.java
18.08.2005	TEST	2.0	Official meeting & finding a bug
19.08.2005	TEST	2.0	Fixing the bug (functionals now update correctly)
19.08.2005	TEST	3.0	Testrunning on the cancer model, fixing misc. bugs
20.08.2005	OTPR	1.0	Javadocing the classes, writing the manual glossary
22.08.2005	TEST	2.0	Made the MasterTest class and ispelled the manual
23.08.2005	MEET	3.0	Meeting with the project group
23.08.2005	OTPR	4.0	Correcting the manual.
24.08.2005	MEET	3.0	Meeting with the project group and another with the customer
24.08.2005	TEST	2.0	Writing the testing document
24.08.2005	OTPR	3.0	Making a handy script for project release
25.08.2005	TEST	1.0	Incorporating tests into MasterTest
25.08.2005	OTPR	2.0	Writing the manual and modifying the Generator
25.08.2005	OTPR	4.0	Writing the manual and the cdrom script
26.08.2005	MEET	1.0	Meeting with the project group
26.08.2005	TEST	2.5	Testing the missing values handling in the generated simulation
26.08.2005	OTPR	1.0	put CD-ROM to the web page and other stuff
26.08.2005	OTPR	2.0	Checked the manual, testing doc, wrote some of the impl. doc
28.08.2005	TEST	4.0	Fixed some latent bugs and refactored stuff. The bird model doesn't work yet.
29.08.2005	MEET	1.0	Meeting with the project group
29.08.2005	OTPR	2.0	Wrote some of the implementation document
30.08.2005	OTPR	2.0	Wrote some of the impl doc
30.08.2005	OTPR	1.0	Reading impl., conc., test. docs for review
31.08.2005	MEET	1.5	Meeting and review of the docs
31.08.2005	OTPR	1.5	Correcting the documents

Joonas Kukkonen

17.5.2005	MEET	1.0	Group meeting
17.5.2005	INST	2.0	Fortran, CVS, Latex, plus other documents
18.5.2005	INST	2.0	Studying Fortran
19.5.2005	MEET	1.0	Planning a meeting
19.5.2005	MEET	2.0	Group meeting
19.5.2005	INST	1.0	Installing CVS
20.5.2005	MEET	1.0	Planning a meeting
20.5.2005	MEET	2.5	Meeting with the client
22.5.2005	OTHE	2.0	Learning to use LaTeX
22.5.2005	PROJ	1.5	Writing Project Plan
23.5.2005	MEET	2.0	Project leader meeting
23.5.2005	MEET	2.0	Group meeting
23.5.2005	OTHE	1.0	Writing week report, planning next meeting
24.5.2005	MEET	2.0	Meeting with the client
24.5.2005	PROJ	2.0	Writing introduction and helping with risks
25.5.2005	MEET	2.0	Group meeting
25.5.2005	PROJ	1.0	Risk analysis
26.5.2005	KNOW	1.0	Reading IEEE SRS
26.5.2005	MEET	1.0	Planning next meeting
27.5.2005	MEET	2.0	Group meeting
27.5.2005	PROJ	1.0	Reviewing the project plan
30.5.2005	MEET	1.0	Planning the meeting
30.5.2005	MEET	2.0	Meeting with the client
30.5.2005	OTHE	1.0	Email, Fortran NAG libraries, etc
31.5.2005	REQU	3.0	Requirements analysis
1.6.2005	MEET	0.5	Planning the meeting
1.6.2005	MEET	2.0	Group meeting
1.6.2005	REQU	1.0	Reviewing requirements, drawing ER model
2.6.2005	MEET	0.5	Planning the meeting
2.6.2005	MEET	2.0	Meeting with the client
2.6.2005	INST	1.0	Studying Fortran
5.6.2005	OTHE	1.0	Email, reading SRS, planning next meeting
6.6.2005	MEET	2.0	Meeting with the client
6.6.2005	OTHE	1.0	Weekly report, studying fortran
7.6.2005	MEET	0.5	Planning the meeting
7.6.2005	MEET	2.0	Group meeting
8.6.2005	MEET	0.5	Planning the meeting
8.6.2005	MEET	2.0	Group meeting
9.6.2005	REQU	2.0	Drawing models, writing SRS
9.6.2005	MEET	0.5	Planning the meeting
9.6.2005	MEET	2.0	Meeting with the client
10.6.2005	REQU	2.0	Writing and reading SRS
10.6.2005	MEET	0.5	Planning the meeting
10.6.2005	MEET	2.0	Group meeting

13.6.2005	MEET	0.5	Planning the meeting
13.6.2005	MEET	2.0	Group meeting
13.6.2005	OTHE	0.5	Weekly report, metric system and hours
14.6.2005	MEET	0.5	Planning the meeting
14.6.2005	MEET	2.0	Group meeting
14.6.2005	DESI	0.5	Planning the modelling language
15.6.2005	MEET	0.5	Planning the meeting
15.6.2005	MEET	1.0	Group meeting
15.6.2005	DESI	1.0	Planning the modeling language with Anni
16.6.2005	DESI	0.5	Reading planed simtech input formats and modeling languge
16.6.2005	REQU	1.0	Reading the SRS
16.6.2005	INST	1.0	Studying Fortran
17.6.2005	MEET	1.0	Planning the meeting
17.6.2005	MEET	2.0	Review (SRS)
19.6.2005	REQU	1.0	Writing SRS
19.6.2005	DESI	1.0	Planning the system
20.6.2005	MEET	0.5	Planning the meeting
20.6.2005	MEET	2.0	Meeting with the project group
20.6.2005	OTHE	0.5	Writing weekly report, etc
21.6.2005	DESI	2.0	Designing data structures
22.6.2005	MEET	0.5	Planning the meeting
22.6.2005	MEET	2.0	Meeting with the project group
22.6.2005	DESI	1.0	Designing data structures
23.6.2005	INST	1.0	Studying Fortran
26.6.2005	DESI	3.0	Designing the generator, drawing models
26.6.2005	OTHE	1.0	Reviewing risks, requirements and reading documets
27.6.2005	MEET	0.5	Planning the meeting
27.6.2005	MEET	2.0	Meeting with the project group
27.6.2005	MEET	1.0	Meeting with Marko Salmenkivi
27.6.2005	OTHE	0.5	Writing weekly report, etc
28.6.2005	DESI	3.0	Designing datastructures and drawing models
29.6.2005	MEET	0.5	Planning the meeting
29.6.2005	MEET	2.0	Meeting with the project group
29.6.2005	DESI	1.0	Designing datastructures and drawing models
30.6.2005	DESI	1.0	Reading design document
30.6.2005	DESI	2.0	Designing generator
1.7.2005	MEET	0.5	Planning the meeting
1.7.2005	MEET	2.0	Meeting with the project group
1.7.2005	DESI	1.0	Designing generator
18.7.2005	MEET	0.5	Planning the meeting
18.7.2005	MEET	2.0	Meeting with the project group
18.7.2005	OTHE	0.5	Writing weekly report, etc
19.07.2005	DESI	2.0	Designing with the group
19.07.2005	DESI	1.0	Designing at home
20.07.2005	DESI	2.5	Meeting with the project group (designing)

20.07.2005	DESI	1.0	Designing the data structures and drawing models
21.07.2005	DESI	3.5	Designing and writing the document
21.07.2005	DESI	0.5	Reading the document
22.07.2005	MEET	2.0	Meeting with the project group
22.07.2005	DESI	1.5	Writing the document, drawing models
24.07.2005	DESI	2.0	Writing the document
25.7.2005	MEET	0.5	Planning the meeting
25.7.2005	MEET	1.0	Meeting with the project group
25.7.2005	DESI	2.0	Writing the design document
25.7.2005	OTHE	0.5	Weekly report, etc
26.7.2005	TEST	0.5	Discussing testing.
26.7.2005	DESI	1.0	Discussing design and reading, writing the design document.
26.7.2005	IMPL	1.5	Coding datastructures
25.7.2005	TEST	1.0	Reading the desing document
27.7.2005	MEET	1.0	Meeting with the project group
27.7.2005	DESI	1.0	Correcting error in Design document
27.7.2005	IMPL	2.0	Coding datastructures
28.7.2005	IMPL	2.0	Coding datastructures
28.7.2005	TEST	1.0	Testing DistributionFactory / UserDefinedDistribution
28.7.2005	DESI	0.5	Correcting errors in design document
29.7.2005	MEET	1.0	Meeting with the project group
29.7.2005	IMPL	2.0	Coding datastructures, correcting errors
30.7.2005	IMPL	1.0	Testing classes, correcting errors
30.7.2005	OTHE	1.0	Writing manual and implementation document templates
31.7.2005	IMPL	1.0	Viewing work of others
31.7.2005	DESI	1.0	Reading the design document
31.7.2005	MEET	0.5	Planning Monday's meeting
01.08.2005	MEET	0.5	Planning the meeting
01.08.2005	MEET	2.0	Meeting with the project group
01.08.2005	OTHE	0.5	Weekly report, etc
01.08.2005	IMPL	1.0	Studying the work of others
02.08.2005	DESI	2.0	Reading the design document and planning the FTR
02.08.2005	IMPL	1.0	Coding datastructures
03.08.2005	MEET	1.0	Design document FTR
03.08.2005	IMPL	2.0	Coding Generator class and correcting errors
03.08.2005	IMPL	1.0	Discussing implementation
04.08.2005	IMPL	3.0	Coding Generator class
05.08.2005	MEET	1.5	Meeting with the project group
05.08.2005	IMPL	1.5	Discussing implementation, coding Generator
07.08.2005	OTHE	1.0	Planning next meeting, reading code, etc
08.08.2005	MEET	1.5	Meeting with the project group
08.08.2005	IMPL	2.0	Coding FortranMain, splitting up classes
08.08.2005	OTHE	0.5	Reviewing timetable, writing weekly report, etc
09.08.2005	MEET	1.0	Meeting with the customer
09.08.2005	IMPL	1.0	Coding FortranMain and reviewing Acceptation

10.08.2005	IMPL	1.0	Coding FortranMain, writing a model
10.08.2005	IMPL	1.0	Trying to get the program to run
10.08.2005	OTHE	2.0	Taina's testing lecture
11.08.2005	MEET	2.0	Meeting with the project group
11.08.2005	OTHE	2.0	Drawing a diagram from the system, reviewing the timetable
14.08.2005	OTHE	1.0	Making a timetable, reviewing things to do
14.08.2005	OTHE	1.0	Discussing timetable and implementation
15.08.2005	MEET	3.0	Official meeting
16.08.2005	TEST	2.5	Meeting, writing tests for distribution classes
16.08.2005	TEST	1.0	Testing at home
17.08.2005	TEST	2.0	Testing and documenting
17.08.2005	TEST	0.5	Documenting at home
17.08.2005	OTPR	0.5	Planning the user manual
18.08.2005	OTPR	4.0	Writing the user manual
18.08.2005	TEST	2.0	Official meeting, hunting bugs
19.08.2005	OTPR	2.0	Writing the user manual
21.08.2005	OTPR	2.0	Writing the user manual
22.08.2005	OTPR	2.0	Reading and writing the user maual
22.08.2005	MEET	0.5	Planning the weekly meetings
23.08.2005	MEET	3.0	Meeting with the project group
24.08.2005	MEET	3.0	Meeting with the project group
25.08.2005	IMPL	3.0	Writing the implementation document
26.08.2005	MEET	1.0	Meeting with the project group
26.08.2005	IMPL	2.5	Writing implementation and testing documents
28.08.2005	IMPL	2.0	Writing implementation document
28.08.2005	OTHE	1.0	Reading the documents, planning the last week
29.8.2005	MEET	1.0	Meeting with the project group
29.8.2005	IMPL	1.5	Writing the implementation document
29.8.2005	TEST	0.5	Writing the testing document
30.8.2005	IMPL	1.0	Finalizing the implementation document
30.8.2005	OTPR	1.0	Writing the end document
30.8.2005	IMPL	1.0	Reading implementation, testing and end document
31.8.2005	OTPR	2.0	Finalizing documents
1.9.2005	OTHE	1.5	Metrics system
1.9.2005	OTPR	0.5	Adding working hours to the conclusion document
1.9.2005	OTHE	1.0	Finalizing the product