SPINGRID

Software Project Management Plan

Version 2-0-0

Software Engineering Project
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A. Abstract

This is the Software Project Management Plan (SPMP) for the SPINGRID project. This project is one of the seven assignments for the course 2IP40 at Eindhoven University of Technology. This document complies with the SPMP from the Software Engineering Standard, as set by the European Space Agency [ESA].The SPMP is used by the Project Manager (PM) to guide the project and to come to an agreement with the customer about budgets and planning. The PM uses the SPMP to organize the project in different phases, i.e. to arrange the teams and their tasks and to set deadlines. This document is related to [SQAP], which describes all phases of the project.

B. Table of contents

C. Document Status Sheet

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1. Introduction

1.1. Project overview

In the SPINGRID project a system has to be designed to support grid-calculations. The software to be made consists of at least three applications, which must interact using the internet. Dispatchers gather jobs from various Submitters and dispatch them to so called Agents. The entire system has to be developed (in JAVA) in a way that it is easy to maintain and extend.

1.2. Project deliverables

During the course of the project, several documents have to be produced and delivered to the customer and to the SM. All these documents have to be written according to the ESA software engineering standards [ESA]. All products that will be delivered to the SM and/or the customer are mentioned in the table below, together with the phases for which they represent outputs. The project manager will send metrics to the SM on a weekly basis. If there is a progress meeting, this information is delivered in a progress report, otherwise a metrics sheet is sent.

Phase	Deliverables	To whom	Format
UR	URD	SM / customer	Paper and electronic form
	ATP	SM / customer	Paper and electronic form
	SPMP	SM	Paper and electronic form
	SCMP	SM	Paper and electronic form
	SQAP	SM	Paper and electronic form
	SVVP	SM	Paper and electronic form
SR	SRD	SM / customer	Paper and electronic form
	STP	SM / customer	Paper and electronic form
AD	ADD	SM / customer	Paper and electronic form
	ITP	SM / customer	Paper and electronic form
DD	DDD	SM / customer	Paper and electronic form
	UTP	SM / customer	Paper and electronic form
	SUM	SM / customer	Paper and electronic form
	STD	SM / customer	Paper and electronic form
	Source code	SM / customer	Electronic form

1.3. Evolution of the SPMP

This document is subject to changes. The assumptions, dependencies and constraints for the project, the detailed time and resource planning for each phase (see appendices) can change during the project. Changes in this information will lead to a new SPMP with a new version number, but with the same status. However, if these changes lead to changes in the milestones planning of the project, described in section 5.5, these changes are discussed with the SM first, before they are incorporated in the document. This will be done during progress meetings. The detailed planning for each phase is described in the appendices of this document. These appendices are updated at different moments in time during the project, but before the start of the phase they refer to.

1.4. List of definitions

AD	Architectural Design
ADD	Architectural Design Document
ATP	Acceptance Test Plan
Client	Monitor, Agent or Submitter
CM	Configuration Management
Customer	Dutch Space B.V.
DD	Detailed Design
DDD	Detailed Design Document
Dispatcher	Application that dispatches jobs to Agents
ITP	Integration Test Plan
Monitor	Application that either monitors dispatchers
PM	Project Manager
QAM	Quality Assurance Manager
SCMP	Software Configuration Management Plan
SM	Senior Management
SPMP	Software Project Management Plan (this document)
SQA	Software Quality Assurance
SQAP	Software Quality Assurance Plan
SR	Software Requirements
SRD	Software Requirements Document
STD	Software Transfer Document
STP	Software Test Plan
Submitter	Application that submits jobs to dispatchers
SUM	Software User Manual
SVVP	Software Verification and Validation Plan
TR	Transfer Phase
UR	User Requirements
URD	User Requirements Document
UTP	Unit Test Plan
VPM	Vice Project Manager
VQAM	Vice Quality Assurance Manager

1.5. List of references

[SPMP] **Software Project Management Plan**
SPINGRID Project
T.M.G. Kleijkers

[SCMP] **Software Configuration Management Plan**
SPINGRID Project

[SVVP] **Software Verification and Validation Plan**
SPINGRID Project

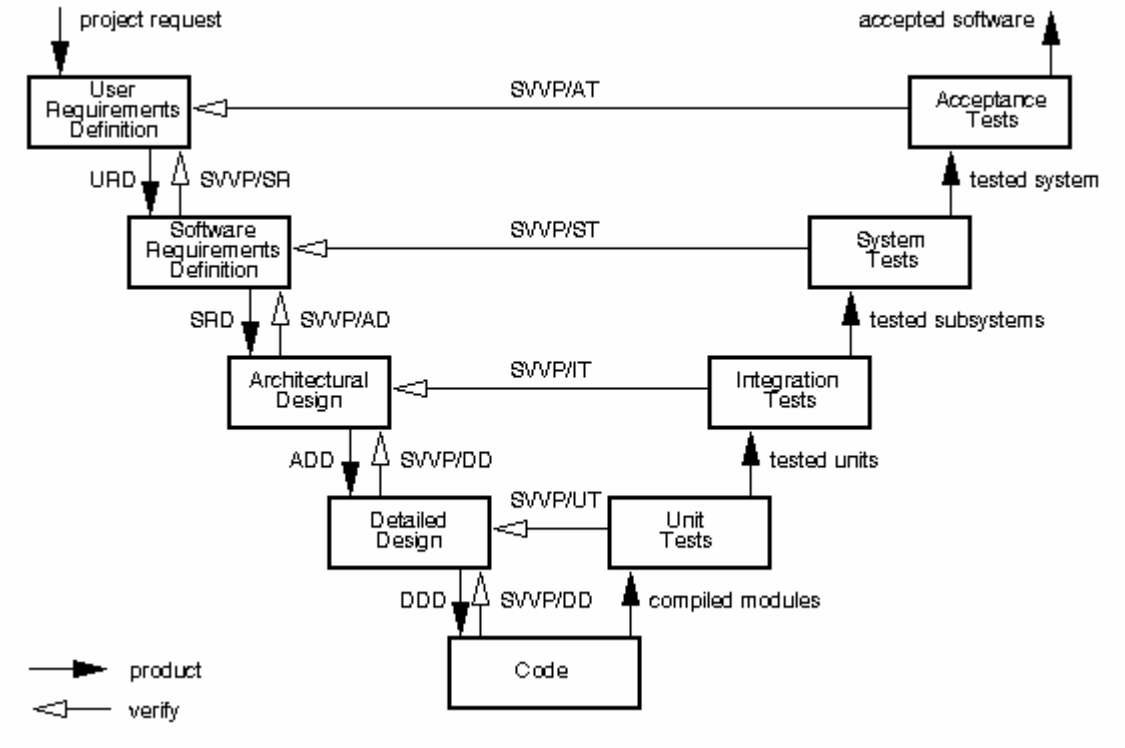
[SQAP] **Software Quality Assurance Plan**
SPINGRID Project

[ESA] **ESA Software Engineering Standards (ESA PSS-05-0 Issue 2)**
ESA Board for Software Standardization and Control (BSSC), 1991

2. Project Organization

2.1. Process Model

The process model used for the SPINGRID project is the waterfall model. We use the so-called V-model:



The project is divided in five phases, which may slightly overlap. These phases are:

UR (user requirements) phase
SR (software requirements) phase
AD (architectural design) phase
DD (detailed design) phase
TR (transfer) phase

The UR phase involves creating the management documents (SPMP, SCMP, SVVP and SQAP) and the URD. Further, the CM team has to make sure all necessary hardware and software is available.
The DD phase involves creating the source code and the unit, integration and system tests. Acceptance tests are performed during the TR phase.

Although the ESA Software Engineering standard prescribes a sixth phase (the maintenance phase) we allow ourselves to omit this phase because the SPINGRID project is terminated after the TR phase has been completed.

2.2. Organizational Structure

In the following table, the roles which are distinguished and the person(s) assigned to each role are given. Roles within the group are described in section 3.5.

Role	Name	E-mail	Room	Phone
Senior Management (SM)	L. Somers	Lou.somers@oce.nl	HG 7.83	(040 247) 2805 / 2733
Senior Management (SM)	T. Punter	t.punter@tue.nl	HG 5.71	(040 247) 3735 / 2526
Advisor	Y. Usenko	y.s.usenko@tue.nl	HG 5.71	(040 247) 3519 / 2526
Customer	Hans de Wolf	h.de.wolf@dutchspace.nl		
Customer	Mark ter Linden	m.ter.linden@dutchspace.nl		

The TU/e employs the SM and the advisor. All other persons are members of the SPINGRID project team. Communication to the SM is always done through the PM. Only the QAM can contact the SM directly in case he is concerned about the functioning of the PM. When the PM is unavailable for a period time, the VPM fulfills his duties.

2.3. Boundaries and Interfaces

During the project, the SPINGRID project team interacts with several other groups. These are:

- The SM. Communication to the SM primarily takes place through the PM. In some cases, the VPM or the QAM can contact the SM;
- The Advisor. He will attend some weekly meetings and may be consulted for technical advice by every group member;
- The Customer. The VPM takes care of the contacts with the customer.

2.4. Project responsibilities

Project Manager

Task: Produce and maintain a project management plan and lead the project according to this plan thus ensuring that the product is delivered on time and as specified in the URD. The PM's management task includes but is not limited to:

- Motivating team members;
- Forming teams and assigning tasks;
- Checking progress;
- Managing the time budget;
- Defining work packages and goals;
- Providing feedback to the SM through progress reports.

Vice Project Manager

Task: Assist the PM and replace the PM when the PM is not available.

Quality Assurance Manager

Task: Guarantee that the product will be delivered as agreed and that it is of good quality. This includes but is not limited to:

- Writing the SQAP and the SVVP;

- Verifying that procedures and standards which are defined in the SQAP and SVVP are adhered to;
- Checking that all project documents are consistent;
- Arranging formal reviews;
- Monitoring and reviewing all testing activities.

Configuration Manager

Task: Perform version management for documents and code. This includes but is not limited to:

- Writing the SCMP;
- Creating a repository for all documents and code;
- Checking that the repository is used appropriate (that is according to the SCMP) by all team members;
- Maintaining the repository according to the SCMP.

Team Leader

Task: Perform all necessary activities to ensure that a task assigned to a team is performed well and on time. This includes but is not limited to:

- Planning and coordinating team activities;
- Providing feedback about team progress to the PM;
- Motivating team members;
- Chairing reviews of the items made by his team.

Team Member

Task: Perform all necessary activities to ensure that a task assigned to a team is performed well and on time. This includes but is not limited to:

- Assisting the Team Leader or Project Manager by signaling problems in an early stage;
- Executing plans made by the Team Leader and by the Project Manager;
- Keeping track of time spent on various tasks;
- Following procedures and plans.

3. Managerial Process

3.1. Objectives and Priorities

The management objective is to deliver the product in time and of high quality. The PM and QAM work together to achieve this by respectively checking that progress is made as planned and monitoring the quality of the product at various stages.

3.2. Assumptions, Dependencies and Constraints

In this project plan, a number of factors are taken into account. For these see chapter 5.5.

Due to the deadline of June 14th , running out of time will have its reflection on the product, and not on the duration of the project. By assigning a priority to every user requirement, a selection can be made of user requirements that may be dropped out if time runs out.

3.3. Risk Management

This section mentions a number of possible risks for the project. Also, actions or measures are described to prevent or to reduce the risks.
Four categories of risks are identified:

1. Risks with respect to the work to be done;
2. Risks with respect to the management;
3. Risks with respect to the resources;
4. Risks with respect to the customer.

The risks for each category are listed below. For each risk, a description, a probability to occur, the action associated and the impact of the risk are given.

3.3.1. Risks with respect to the work to be done

We only discuss the most important risks.

1. Miscommunication
Probability: Medium
Prevention: After a meeting, one group member creates an interview report. Every participant and every person who should have been a participant of the meeting should get a copy of this report. Team members should not hesitate to ask and re-ask questions if things are unclear.
Correction: When it becomes clear that miscommunication is causing problems, the team members involved and the customer are gathered in a meeting to clear things up.
Impact: High

2. Time shortage
Probability: High
Prevention: Care is taken to plan enough spare time.
Correction: When tasks fail to be finished in time or when they are finished earlier than planned the project planning is adjusted. If time shortage becomes severe, user requirements, which have low priority, are dropped after consultation with the SM and the customer.
Impact: High

3. Design Errors
Probability: Medium
Prevention: The design should be reviewed very critically. The advisor should be consulted frequently on his opinion about the feasibility and the correctness of certain design decisions.
Correction: When errors in the design are noticed the advisor should be consulted to help correct the design errors as soon as possible. Also all the work, that depends on the faulty design, should be halted until the error is corrected.
Impact: High

4. Illness or absence of team members
Probability: High
Prevention: Team members should warn their team leader or the PM timely before a planned period of absence.
Correction: By ensuring that knowledge is shared between team members, work can be taken over quickly by someone else if a person gets ill. When work needs to be taken over by someone a re division is made of his other tasks so that the workload does not get too high. Planned absence is dealt with in the planning.
Impact: Medium

5. Server crash
Probability: Low
Prevention: All products are stored in the project repository, which is backed up regularly by the CM.
Correction: When a product gets lost from its working store it is recovered from the most recent backup.
Impact: Medium

3.3.2. Risks with respect to management

6. Illness or sudden absence of the project manager
Probability: Low
Prevention: There are very few things in which the presence of the PM cannot be missed for a short period of time. Nevertheless the PM will inform the VPM of a planned period of absence in time so that the VPM can prepare to take over.
Correction: By keeping the VPM up-to-date on the project status he will have enough knowledge to take over in case of illness or absence of the PM.
Impact: Low

3.3.3. Risks with respect to resources

7. Unavailability of the technical advisor when needed
Probability: Medium
Prevention: Meetings with the technical advisor can be planned in advance and time has been reserved in his schedule for counseling the team.
Correction: A different appointment is made, or another expert is consulted.
Impact: Medium

3.3.4. Risks with respect to the customer

8. The customer changes his mind about the requirements
Probability: High
Prevention: It is obviously explained to the customer, that after he has accepted a version of the URD, the URD cannot be changed by the customer's wish only.
Correction: If the customer changes his mind during the UR phase his new requirements can be incorporated in the URD. Procedures described in [SQAP] detail how the URD may be changed after approval, and how to implement these changes.
Impact: Low

9. The customer is not available when needed
Probability: Medium
Prevention: Meetings with the customer can be planned well in advance. The customer has been given room in his schedule for his Software Engineering related work.
Correction: When the customer is not available, meetings may have to be rescheduled.
Impact: Medium

3.3.5. Summary

It is obvious that problems will occur during the project. To avoid problems the following rules should be followed by all team members:

- Try to signal problems as early as possible and report them to the PM, so that action can be taken;
- Pay attention to communication and make sure everybody understands the things the same way;
- Focus on the agreed user requirements, which express the wishes of the customer;
- Minimize friction between people by helping and supporting each other;
- Follow guidelines that are posed in [SQAP] and [SCMP] to aid coordination and to ensure product quality.

3.4. Monitoring and Controlling Mechanisms

The monitoring of progress is done by the PM using the following means:

Weekly Project Group Meetings
The project group meetings take place in the project room. Project group meetings usually take place on Monday at 9:15 in HG 5.14, although this time may be subject to change, e-mails will be send about the time if it changes. These meetings are meant to inform each other of the progress made on various tasks. New tasks are assigned by the PM on these meetings. Before the meeting, all members read minutes of previous meeting. The PM takes care of the agenda and presides the meeting.

Progress Meetings
These meetings are scheduled biweekly at 12:20. On these meetings the PM and the VPM or QAM meet with the SM. Before progress meetings the following things need to be done:

- Write a progress report after the example of the previous reports;
- Read the minutes of the previous meeting;
- Deliver the report to the SM half an hour before the start of the first meeting on that day.

Project metrics
Every week, the work done by the members, needs to be administrated. Each team member has to fill in their hours on a webbased log. This log needs to be filled in every Monday before 12:00. A week starts at Monday and ends at Sunday. Every entry in a log has to belong to one of the following work-packages:
SPMP, SVVP, UTP, ITP, STP, ATP, SCMP, SQAP, URD, SRD, Prototype, Research, ADD, DDD, Code, IT,ST,AT, STD, Formal reviews, Meetings or Presentations.

The PM sends an e-mail to the SM every week, containing the hours spend on the different work packages and the hours spend on following categories: Non project related, General project related, Documentation, specification, design, Source code, Testing, verification, consolidation and rework. Further, for every work-package, an estimation of remaining hours is added.

Team leader meetings
Whenever the PM or QAM finds it necessary he can arrange a team leader meeting. Team leader meetings are rather informal and infrequent and the tasks required for one depend on the purpose of the meeting.

3.5. Staff Plan

The following table contains contact information about the members of the SPINGRID project group:

Name	Email	Phone	Function
Kleijkers, TMG	t.m.g.kleijkers@student.tue.nl	06-44642081	PM
Bego, SCH	s.c.h.bego@student.tue.nl	06-46445710	VQAM
Coset, RPJ	r.p.j.coset@student.tue.nl	06-18194569	
Leeuwestein, R	r.leeuwestein@student.tue.nl	06-18044463	VPM
Leijten, MCG	m.c.g.leijten@student.tue.nl	06-30509901	
Linden, vd, I	i.v.d.linden@student.tue.nl	06-47054703	QAM
Mens, JCJ	j.c.j.mens@student.tue.nl	06-33746597	VCM
Moreaux, ML	m.l.moreaux@student.tue.nl	06-15341191	CM
Muller, TJC	t.j.c.muller@student.tue.nl	06-24538894	Manager External Contacts

4. Technical Process

4.1. Methods, Tools and Techniques

The methods, tools and techniques used during the course of the project are listed in the [SCMP].

4.2. Software Documentation

During the project, documents should conform to a number of aspects:

Documents must be of good quality.
The standards all documents are required to meet are documented in the [SCMP] with respect to style and in [SQAP] with respect to content.

Documents must be reviewed.
The manner in which document reviews are performed is described in the [SVVP].

The purpose of document reviews is to get docs of high quality.
The requirements which apply to the approval of documents are given in the [SVVP].

4.3. Project Support Functions

Besides Project Management, three other management functions are present. Below a short description of each of them is given.

Configuration Management
The purpose of software configuration management is to plan, organize, control and coordinate the identification, storage and change of software through development and transfer. ([ESA PSS-05-08, Section 2.1]). The CM writes the SCMP in which plans are outlined for performing these tasks.

Verification and Validation
Software Verification and Validation activities check the software against its specifications. ([ESA PSS-05-09, Section 2.1]). The QA team writes the SVVP. In this document the verification and validation activities are described.

Quality Assurance
ESA PSS-05-0 defines Software Quality Assurance (SQA) as a planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product confirms to established technical requirements. ([ESA PSS-05-10, Section 2.1]). The QAM outlines plans and procedures needed for performing this task in the SQAP.

5. Work packages, Schedule, Budget

5.1. Work packages

The work packages are prescribed by the SM. All work packages with their managers and estimated time are listed below:

Work Package	Manager	Hours estimated
SPMP	PM	50
SVVP	QAM	20
UTP		30
ITP	QAM	30
STP	QAM	30
ATP	QAM	30
SCMP	CM	80
SQAP	QAM	30
URD		90
SRD		126
Prototype		130
Research		150
ADD		120
DDD		120
Code		520
SUM		60
IT,ST,AT	QAM	120
STD		40
Formal reviews	QAM	100
Meetings	PM	280
Presentations		60

5.2. Dependencies

For the UR and the SR phase, a dependency chart is not necessary as dependencies are trivial. The URD must be more or less ready before work on the SRD can start. However, it is unavoidable that, while working on the SRD, new questions arise about the user requirements. So the SRD does not strictly depend of the URD. Likewise working on the ADD can lead to changes to the SRD and so on.

The prototype must not be later than the SRD since it is part of it. In the AD phase there are few dependencies between tasks. Within the AD phase no work packages are dependent on each other. When the first results of the AD phase are there, the DD phase commences. Work packages don't depend on each other since interfaces between components have been defined in previous phases. The TR phase is the last phase. Obviously, it is not possible to transfer the product before it is ready. Therefore the DD phase must be completed before the TR phase starts.

5.3. Resource Requirements

The most important resources during the project are human resources. An overview of resource utilization during the various project phases is given in section 5.4. Other resources needed include development stations, a server where documents and information can be stored, a printer, network connectivity, a working and meeting room with sufficient tables and chairs and a telephone. During the project software is required. For example a programming language and a text editor are necessary. [SCMP] describes the software that is used during the project.

5.4. Budget and Resource Allocation

For each phase as described in this SPMP, a budget has been estimated. In all of the budget estimates the time spent by the PM and Advisor is not taken into account and work packages assigned to the PM are not specified

Phase	Estimate (man hours)
UR	300
SR	350
AD	420
DD	996
TR	150
Margin	368
Total	**2464**

This budget is extended by the availability of:

- A sufficiently furnished workroom;
- A printer supplied by TU/e;
- A white board (plus white board markers);
- 8 (relatively slow) notebook computers;
- A server to support CM tasks;
- Two computers for development purposes (one of which is the server).

Furthermore in the appendices a detailed phase budget is given for each phase as the project moves on.

5.5. Schedule

The following table depicts the way milestones are coupled to various project phases and when they are scheduled:

- The team budget of 8 persons x 308 hours = 2464 hours;
- The PM budget of 80 hours;
- The project deadline of June 14th
- The final presentation of June 12th
- The intermediate presentation of February 13th
- The peer evaluation deadline of April 3th
- A holiday from December 26th till January 6th
- A holiday from February 27th till March 3th
- Other days the TU/e is closed (April 14th, April 17th, May 5th, May 25th, May 26th, June 5th).

Phase	Milestone	Description	Planned date
UR		Management documents approved	December 23th
	M1	URD approved	January 16th
SR		Prototype approved	February 20th
	M2	SRD approved	February 24th
AD	M3	ADD approved	April 10th
		DDD approved	April 25th
DD		Coding complete	May 16rd
TR	M4/M5	Acceptance test successful (always plan 2 as the 1st will usually fail)	May 29th
	M6	Product handover complete	June 14rd

5.6. Unavailability Overview

In the following table we'll list which of the group members will be unavailiable for some peroide of time, outside exam weeks and holidays.

Name	Date	Function
Kleijkers, TMG	27 February – 3 March 2006	PM
Bego, SCH		VQAM
Coset, RPJ		
Leeuwestein, R		VPM
Leijten, MCG		
Linden, vd, I	27 January 2006 – 3 February 2006	QAM
Mens, JCJ		VCM
Moreaux, ML	20 December – 28 December	CM
Muller, TJC	27 January 2006 – 3 February 2006	Manager Externe Contacten

Appendix A: UR Phase

A.1 Outputs UR Phase

The UR phase can be called the problem definition phase. User requirements are documented in the URD, giving the customers view of the problem. The main outputs of the UR phase are the:

- URD;
- SPMP, SPMP/UR, SPMP/SR;
- SCMP, SCMP/UR, SCMP/SR;
- SQAP, SQAP/UR, SQAP/SR;
- SVVP, SVVP/UR, SVVP/SR;
- ATP.

A.2 Teams and work packages

Team	Members	Work packages
Project Management	TMG Kleijkers (PM) R Leeuwestein (VPM)	SPMP
Quality Assurance	I v.d. Linden (QAM) SCH Bego (VQAM)	SQAP, SVVP, ATP
Configuration Management	ML Moreaux (CM) JCJ Mens (VCM)	SCMP
User requirements	URD Team	URD
	All	Meetings, research

Appendix B: SR Phase

In the SR phase the main focus is on the definition of the software requirements. Besides the URD the management documents are modified for the AD phase.

B.1 Outputs SR Phase

The input to the SR phase is the URD and the ESA software engineering standard. The deliverables are:

- SRD
- Prototype
- SPMP/AD
- SCMP/AD
- SQAP/AD
- SVVP/AD
- STP

B.2 Teams, work packages and planning

Work Packages, tasks	Members (responsible)	Deadline
SPMP		
SPMP/AD	T.Kleijkers	Februari 24
Project management meetings	T.Kleijkers	
Progress meetings	T.Kleijkers / I. v.d. Linden	
Project metrics	T.Kleijkers	
SCMP		
SCMP/AD	CM members	February 24
Server maintenance	CM Members	
SQAP		
SQAP/AD	QAM / VQAM	February 24
Internal review(s) SRD	QAM / VQAM	
External review(s) SRD	QAM / VQAM	
SVVP		
SVVP/AD	QAM/ VQAM	February 24
STP	QAM / VQAM	
SRD		
First draft version	SRD team	February 6
Internally approved version	SRD team	February 13
Externally approved version	SRD team	February 20
Prototype first version	SRD team	February 13
Prototype externally approved version	SRD team	February 20
Various		
Presentation	I. v.d. Linden, T.Muller	February 13
Meetings	All	
Research	All	

Appendix C: AD Phase

In the AD phase the main focus is on the definition of the components of the product and the interaction between those components. Besides the ADD the management documents are modified for the DD phase.

C.1 Outputs AD Phase

The input to the AD phase is the SRD and the ESA software engineering standard. The deliverables are:

- ADD
- ITP (specific tests are not formulated until the DD phase)
- SPMP/DD
- SCMP/DD
- SQAP/DD
- SVVP/DD

C.2 Planning for the rest of the project

Work Packages, tasks	Remarks	Members	Deadline
DD Appendices		Members of the respective plans	April 10
ADD		M.Leijten, R.Leeuwenstein, S.Bego	April 10
DDD	For the largest part comparable to the ADD, but features: • Standards and conventions • Build procedure • Source code listings	All.	
STP	Test the system against the SRD	R.Leeuwenstein, S.Bego	Week 18
UTP	Test the system against the units of the ADD	M.Leijten, R.Leeuwenstein	Week 18
ITP	Test the system integration as also described in against the DDD works	J.Mens, R.Leeuwestein	Week 18
ATP	Test against URD final test	J.Mens, R.Leeuwestein	Week 18
STD	This document describes how to install the system	R.Leeuwenstein, S.Bego	Week 18
SUM	Software user manual	R.Leeuwenstein, M.Leijten, S.Bego	Week 19

Appendix D: DD Phase

In the DD phase the components of the AD phase are designed in full detail. When the design is completely finished, the component will be implemented. After this, the unit test is done. Obviously the design takes most of the time. If a design is of high quality, the coding and testing can be done fast.
During this phase, the plans of the transfer phase will be inserted into the management documents.

D.1 Outputs DD Phase

The input to the DD phase is the ADD and the ESA software engineering standard.
The deliverables are:

- DDD
- SUM
- A working version of the software
- SPMP/TR
- UTP
- Test reports of unit and integration testing procedures

D.2 Teams, work packages and planning

Work Packages, tasks	**Members**	**Deadline**
SPMP		
SPMP/TR	T.Kleijkers	Week 24
Project management meetings	T.Kleijkers	Week 24
Progress meetings	T.Kleijkers	Week 24
Project metrics	T.Kleijkers	Week 24
SCMP		
Backup	CM	Week 24
Server maintenance	CM	Week 24
SQAP		
Internal review(s) DDD	QAM	Week 24
External review(s) DDD	QAM	Week 24
Internal review(s) SUM	QAM	Week 24
External review(s) SUM	QAM	Week 24
SVVP		
Document checking	QAM	Week 24
DDD		
First draft version	All	Week 24
Internally approved version	All	Week 24
Externally approved version	All	Week 24
Detailed design		
Designing / documenting	All	Week 21
Coding	All	Week 22
Testing	All	Week 24
Sum		
First draft version	R.Leeuwestein, S.Bego	Week 21

Externally approved version	R.Leeuwestein, S.Bego	Week 24
Various		
Meetings	All	
Research	All	