Requirements document

SQUID

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Software Engineering Project

UNIVERSITY OF HELSINKI
Department of Computer Science

Course

581260 Software Engineering Project (6 cr)

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Change Log

Version	Date	Modifications
0.1	9.2.2005	First version (Aki Sysmäläinen)

Contents

1 Introduction

This document describes client requirements and system requirements for a SQUID magnetometer program that will be designed and implemeted as a software engineering student project at University of Helsinki at the Computer Science Department. The client is the Department of Geophysics.

This document serves as a contract between client and us..

Expected readership of this document here..

1.1 Glossary

Technical terms here..

2 Overview

A brief overview of the problem domain..

3 User requirements definition

Goals of the software set by client..

3.1 Requirements

Requirements by client..

3.2 Use cases

Squid Use Cases, preliminary list with no explanations nor scenarios.

3.2.1 General measuring

- Do single step measuring without demagnetization
- Do single step measuring with demagnetization
- Do automatic demagnetization-measuring sequence
- Do thellier measuring
- Do thermal measuring

- Measure magnetometer ground noise
- Measure empty sample holder noise
- Fully manual measuring
  - Move sample handler to desired position
  - Rotate sample handler to desired angle
  - Measure in current position
  - Demagnetize in current position

3.2.2 File formats

- Automatically save all measurement cycles in .dat? file
- Save standard sample measurement results in .std file
- Export (thellier) results into .tdt file
- Export single measurement details into .srm file
- Print measurement results
- Print graph sheet (with 7 different graphs; described elsewhere x)

3.2.3 Functionality

- Load .dat? file
- Append measurement results to .dat? file
- Create new .dat? file (project?)
- Insert AF sequence with start-step-stop values
- Load AF sequence
- Save AF sequence
- Edit AF sequence on-the-fly
- Pause AF sequence
- Panic abort operation instantly

3.3 Restrictions

Restrictions set by client..

4 System requirements specifi cation

Specific explanation of the functions to be implemented

4.1 Functional requirements

4.2 Non-functional requirements

Requirements conserning the quality and performance of the software..

4.2.1 Environment

4.2.2 Maintainability

4.2.3 Etc.

4.2.4 Etc.

4.3 External interfaces

Interface to existing software and use of it described here..

4.4 System restrictions

5 User interface

Overview of UI described here..

6 Architecture overview

7 Validation

Description of how to validate the set requirements.