SCATS

SALES AND CUSTOMER TRACKING SYSTEM

SOFTWARE REQUIREMENTS SPECIFICATION

VERSION: FINAL 1.0

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REVISION CHART

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1. INTRODUCTION

1.1 Purpose

The purpose of this System Requirement Specification document is to describe the system services and constraints in detail. This document is intended for System end-users, System architects and System developers.

1.2 Scope

The application to be developed is a sale and customer tracking system named SCATS.

SCATS will process sales data based on data entry by users and produce sales statistics on customers and sales persons. The results can be printed.

BOEC Company will through SCATS achieve the following objectives:

- An increase of the marked and an increase in profitability.
- Cost effectiveness in the use of all resources.
- To handle more customers.
- An error reduction in the handling process.
- An increase in flexibility and speed of activities.
- To have more timely information.
- An improvement in management planning and control.

1.3 Definitions, Acronyms, and Abbreviations

SCATS	Sales and Customer Tracking System
UCD	Use Case Diagram

1.4 References

SCATS Sales and Customer Tracking System, Informal Software Specification – Version 1.0.

1.5 Overview

This will be the content and organization of the rest of this document

- Chapter 2 will provide the overall description of the SCATS application.

- Chapter 3 will contain the User requirements for SCATS.
- Chapter 4 will contain the system architecture description.
- Chapter 5 will contain the system requirement specification.
- Chapter 6 will contain the domain model for SCATS.
- Chapter 7 will contain the system evolution description.
- Chapter 8 will contain appendices.

2. OVERALL DESCRIPTION

2.1 Product Perspective

The SCATS application is an independent application and there are no interfaces between SCATS and related systems.

2.1.1 User Interfaces

A browser will be used as a graphical user interface. In the design phase of the SCATS system, the lay out of the required screen formats, report layouts and menu structures will be decided on.

2.2 Product Functions

The system will be able to register data on a sale.

The system will be able to produce statistics on sales, products, sales persons and revenue.

The system will be able to present the statistics on screen and on reports.

2.3 User Characteristics

The users are familiar with the existing PC based spreadsheet solution. They are also familiar with Windows 98 and MS office applications through seminars and use. Beside this they have no technical expertise.

2.4 Assumptions and Dependencies

Integration between SCATS an E-business solution will be developed in a later phase of the project. This will drive change in the requirements.

2.5 Apportioning of Requirements

Develop the integration between SCATS and E-business solution.

3. USER REQUIREMENT DEFINITION

The SCAT User Requirements are to be inserted here.

4. SYSTEM ARCHITECTURE

SCATS will be developed on a UNIX platform. SCATS will be a distributed Java application. Communication between users and the application will be performed trough a browser.

For the time being the decision on the system architecture showing the distribution of functions across system modules is yet to be taken.

The final decision on the system architecture will be made in the design phase of the project.

5. SYSTEM REQUIREMENTS SPECIFICATION

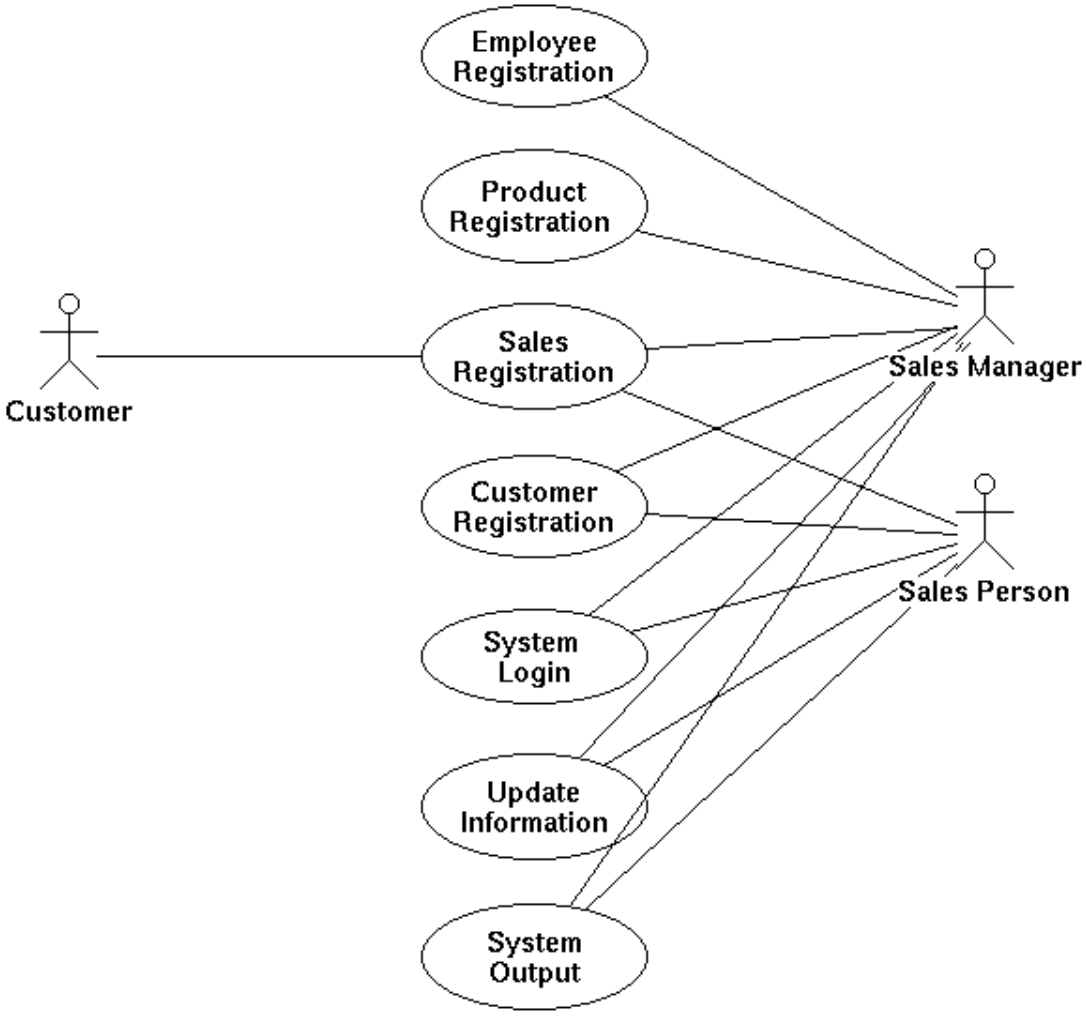
This section will describe the functional and non-functional requirements at a sufficient level of detail for the designers to design a system satisfying the User requirements and testes to verify that the system satisfies the requirements.

The system requirements will be developed through object oriented analysis and design methods by the use of UML model language.

All system requirements will be uniquely identifiable.

5.1 Use Case Diagram for SCATS

The figure shows the Use Case Diagram (UCD) for SCATS. The UCD is developed as a part of the analysis phase of the system development process. This diagram might be changed during later stages in the development process.



5.2 Specification of actors

The following actors are defined so far in the analysis phase of the SCATS system development process.

5.2.1 Customer

Customer	
Element	**Details**
Description	A Customer is a client of the BOEC business. This can be an individual or a company.
Examples	A Customer buys products and pay cash. A Customer buys products on credit and pay after a period of time.

5.2.2 Sales Manager

Sales Manager	
Element	**Details**
Description	Sales Manager is the person in the sales department who oversees the sales activity.
Examples	The Sales manager is allowed to update all information in the system. Also his/her own information. Only the Sales Manager can register new products and new Sales Persons. The Sales Manager can also make a sale to a customer.

5.2.3 Sales Person

Sales Person	
Element	**Details**
Description	The Sales Person is the person that interacts with the Customers and makes sales.
Examples	A Customer shows up at BOEC and buys some products from the Sales Person. A Sales Person will also answer a telephone call from Customer and make a sale.

5.3 Specification of Use Cases

5.3.1 Use Case 1. Employee Registration

EmployeeRegistration	
Element	**Details**
Actor	Sales Manager
Trigger	The Sales Manager needs to register an new employee
Pre Conditions	The employee is not registered, the user is logged into the system, and the system menu is displayed.
Post Conditions	The employee is registered and has a username and password, the user is logged into the system, and the system menu is displayed.
Normal course	1. The Sales Manager collects employees' data 2. The Sales Manager creates a new user account 3. The Sales Manager defines username and password 4. The employee is given a user name and password
Alternative courses	3a. The user name already exists. 3a1. Create a different user name.

5.3.2 Use Case 2. Product Registration

ProductRegistration	
Element	**Details**
Actor	Sales Manager
Trigger	The supplier have delivered the new product
Pre Conditions	The product is not in the stock, the user is logged into the system, and the system menu is displayed.
Post Conditions	The product is in the stock, the user is logged into the system, and the system menu is displayed.
Normal Event Flow	1. The sales manager open the product registration form by choosing the menu item for this action 2. Sales Manager registers all necessary information about the product in the system. 3. Sales Manager update the System by confirming the data entered into the registration form.

ProductRegistration	
Element	**Details**
Variations	3a. Mandatory fields in the registration form are missing 3a1. The system reject the system update with an error message about missing mandatory fields.

5.3.3 Use Case 3. Sales Registration

SalesRegistration	
Element	**Details**
Actor	Customer, Sales Manager, Sales Person
Trigger	Customer wants to buy something
Pre Conditions	The product is in the stock, the user is logged into the system, and the system menu is displayed.
Post Conditions	The sale is registered, the inventory is updated, the user is logged into the system, and the system menu is displayed.
Normal event flow	1. Customer asks for product 2. Sales Person looks for a product in the system 3. Sales Person updates the system 4. The system calculate the total of the invoice (product * quantity)
Variations	2a.The product is not in the stock 2a1.The system informs that the product is not available 3a.The system cannot update the product 3a1.Check manually, make manually sale and report to Sales Manager
Relevant information	Questionnaires or Answers should be in text, choice boxes, or different alternatives

5.3.4 Use Case 4. Customer Registration

CustomerRegistration	
Element	**Details**
Actor	Sales Person, Sales Manager
Trigger	Customer is not registered in the System and the user wish to register a sale.
Pre Conditions	Customer's ID is not listed in the system, the user is logged into the system, and the system menu is displayed.
Post Conditions	Customer is registered in the system, the user is logged into the system, and the system menu is displayed.
Normal course	1. Registration form appears on the screen 2. System increment the last registered Customer ID by 1 to get the ID for the new Customer. 3. Sales Person or Sales Manager fill in the Customer's information including Name, Adress(es), Phone number(s), E-mail(s), Contact person 4. System update
Alternative courses	3a. Not all mandatory data fields are filled 3a1.Sales Person or Sales Manager fills in the missing data fields

5.3.5 Use Case 5. SystemLogin

SystemLogin	
Element	**Details**
Actor	Sales Manager, Sales Person
Trigger	The user wish to start using the system.
Pre Conditions	The user is not logged into the system.
Post Conditions	The user is logged into the system, and the system menu is displayed.
Normal course	1. The user click the link for the SCATS application and a login form appear on the screen. 2. The user types his username and password into the form and press the login button. 3. The system confirms that the user is logged on.

SystemLogin	
Element	**Details**
Alternative courses	2a. The user is not a valid user or the user name or the password is mistyped. 2a1. The system reject login with an error message that express wrong login name or password.

5.3.6 Use Case 6. Update Information

UpdateInformation	
Element	**Details**
Actor	Sales Manager, Sales Person
Trigger	Sales Manager or Sales Person is noticed by manually routines that one or several data in system are outdated, false or are missing.
Pre Conditions	System contains outdated, false or are missing data, the user is logged into the system, and the system menu is displayed.
Post Conditions	The system contains valid and updated data, the user is logged into the system, and the system menu is displayed.
Normal course	1. Sales person or Sales Manager opens relevant input form from menu. (Update Customer, Update Product Update Sales Person Information) 2. Sales Person or Sales Manager correct or fills in missing information. 3. Sales person or Sales Manager closes the form and the system is updated.
Alternative courses	1a Sales Person try to update own sales information data. 1a1 Only Sales Manager is allowed to update sales information for a Sales Person. 1a2 System rejects action from Sales Person with an error message. 1b Sales Person try to update information on other Sales Person or on Sales Manager 1b1 Sales Person is not allowed to update information on other users. 121 System rejects action from Sales Person with an error message.

5.3.7 Use Case 7. System Output

SystemOutput	
Element	**Details**
Actor	Sales Person, Sales Manager
Trigger	The Sales Person or Sales Manager asks for a presentation of statistical data of products, sales customers or Sales Persons.
Pre Conditions	The user is logged into the system, and the system menu is displayed.
Post Conditions	A report is displayed in a part of the browser window or is printed out on paper. The user is logged into the system, and the system menu is displayed.

Normal course	1. The Sales Person or the Sales Manager chooses between the menu choices *Customers*, *Sales Persons*, *Products* or *Statistics* from an on screen menu. 2. If the *Customers* menu choice is chosen a menu containing the alternatives *All Customers* and *Specific Customer* appears on screen. 3. If the *All Customer* menu choice is chosen, an alphabetically sorted list of all customers is displayed. 4. IF the *Specific Customer* menu choice is chosen the user must input the Customer ID to retrieve all data about the customer. 5. If the *Sales Persons* menu choice is chosen an alphabetically sorted list containing the names of the Sales Persons is displayed. 6. If the *Products* menu choice is chosen a menu containing the alternatives *All Products* and *Specific Product* is displayed on screen. 7. If the *All Products* menu choice is chosen, an alphabetically sorted list containing all the products is displayed. 8. If the *Specific Product* menu choice is chosen, the user must input the product number to retrieve all data about the product, included the stock inventory for the product. 9. If the *Statistics* menu choice is chosen a menu containing the alternatives *Sales Person Historical Data, Total Largest Revenue, Best Sales Person, Most Sold Product* and *Less Sold Product.* 10. If the *Sales Person Historical Data* is menu choice is chosen, the user must enter the values *from date* and *to date* to be able to list all the sales, belonging to the user, he has closed between these two dates 11. If the *Total Largest Revenue* menu choice is chosen, a list containing the Sales Persons and their total sales revenuer is displayed as long as the user is a Sales Manager. 12. If the *Best Sales Person* menu choice is chosen, the user must enter the ID of the product and a list containing the Sales Persons and their revenue for the specified product in descending order is displayed as long as the user is a Sales Manager. 13. If the *Most Sold Product* menu choice is chosen, the user must enter the values *from date* and *to date* to be able to list the most sold products and their total revenue between the two dates, as long as the user is a Sales Manager. 14. If the *Less Sold Product* menu choice is chosen, the user must enter the values *from date* and *to date* to be able to list the less sold products and their total revenue between the two dates, as long as the user is a Sales Manager.

Alternative courses	4a A non existing customer ID is entered into the system 4a1 An error message is displayed and return to 2. 8a A non existing product ID is entered into the system 8a1 An error message is displayed and return to 6. 11a The user is not a System Manager. 11a1. An error message is displayed and return to 1. 12a The user is not a System Manager. 12a1. An error message is displayed and return to 1. 13a The user is not a System Manager. 13a1. An error message is displayed and return to 1. 14a The user is not a System Manager. 14a1. An error message is displayed and return to 1.

5.4 External Interface Requirements

This section will contain specification on the layout of the user interface. This design is to be decided upon later in the project timeline.

5.5 Performance Requirements

No performance requirements are specified in the User requirements.

5.6 Design Constraints

The SCATS application will be developed according to an incremental process model. An object oriented analysis and design will be used as a method in the process.

5.7 Software System Attributes

5.7.1 Security

All users will have access to the SCATS application restricted by a logon containing ID and password. There will be activity logging by updating a log-file containing the fields (ID, timestamp, success/failure).

5.7.2 Maintainability

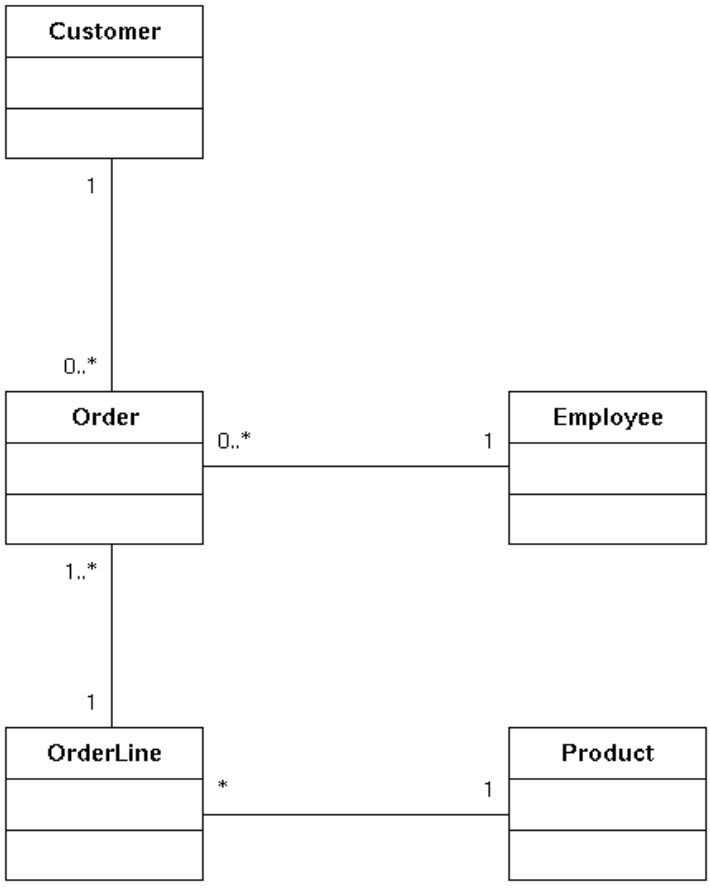
As a tool to obtain the ease of maintainability the CASE-tool Tau_UML will be used in the development process.

5.7.3 Portability

To ensure portability, the SCATS application will be developed in JAVA language.

6. SYSTEM MODELS

The figure shows the System model expressed as an object model in the analysis phase of the development process.



7. SYSTEM EVOLUTION

The SCATS application is developed in Java. This is believed to assure platform independence for the application.

8. APPENDICES

No appendices.