V2Soft

V_{iki} S_{oftware}

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Document Description:

This document is one of the most important steps of software project development that is configuration management plan of RAS-2005.

V2Soft RAS-2005 CMP				
Responsibility	*Name*	*Prepared by*	*Inspected by*	*Signature*
Project Manager	Çağdaş EKİNCİ	√	√	
Designer	Atilla ACAR	√		
Designer	Mevlüt BALLI	√		
Designer	Özkan ÇELİK	√		

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1. Introduction

This document describes all Configuration Management (CM) activities for RAS-2005 (Restaurant Automation Sytem 2005), that is a complete solution for restaurant automation and designed by V2 team. This Configuration Management Plan (CMP) defines the schedules, functions and responsibilities for controlling the system configuration during the development, testing and deployment of the RAS-2005.

1.1 Purpose of this Document

The purpose of this document is to determine the processes needed for identifying, documenting, evaluating, controlling and approving all changes to work products which are created throughout the life cycle of *RAS-2005*. This CMP document describes the configuration management structure of *RAS-2005*.

1.2 RAS-2005 OverView

RAS-2005 is a restaurant automation system designed to facilitate the usage, for internet customers, restaurant owners, waiters in restaurants and customers at restaurant. With the help of this program, internet customers will be able to make online orderings, with special user names and passwords to get rid of internet based detailed jobs. Restaurant owners will be able to manage their basic accounting at any time such as income / expenditure position at any time they want. They will also have increase in customer number due to the fast service and well-organized system. Waiters in the restaurants will stop useless coming and going duty. They will get less tired, which will result in better communication with customers and improved performance. In terms of the customer at restaurant, they will not need to wait for waiter and they will save time. In conclusion, RAS-2005 will ease and automate ordering system over internet and palm devices. That is, better management and better organization in restaurants.

The analysis and design phases of RAS-2005 have been completed. Now we are ready for implementation. Before the implementation phase of RAS-2005, CMP must be done, and

1.3 Scope of Document

This document provides the guidelines for identification, version control, change control, configuration auditing and reporting. With the help of these guidelines we will ensure followings:

1. Effective change control is established and maintained

2. Change control is established and maintained effectively

3. Related team members are informed and aware of the impact of proposed changes (they will also participate in evaluation of the changes).

4. Project documentation is received, recorded and released in an orderly and consistent manner.

1.4 Definitions, Acronyms and Abbreviations

BR Bug Report

CCB Configuration Control Board

CM Configuration Manager

SCM Software Configuration Management

CRR Change Request Report

CI Configuration Item

CMP Configuration Management Plan

SCR Software Change Request

SQA Software Quality Assurance

SW Software

TRR Test Readiness Review

1.5 Document References

IEEE Standard for Software Configuration Management Plans (IEEE Std 828-1990) ISO Configuration Management for Software (ISO/IEC TR 15846)

1.6 Document Overview

This document includes this sections.In section one one can see identifies, describes the purpose, summarizes the contents and lists the documents referenced. In section two one can see describes outlines the resources and organizational structure for performing software configuration management. In section three one can see definitions in detail the software configuration management activities. In section four one can see the schedule for CM activities. In section five one can see definitions of the project resources that means tools and methods for SCM. In section six one can see explaintions of the plan optimization strategy.

2. The Organizations CM Framework

2.1 Organization

The CCB has the following functions; authorizes the establishment of project baselines and identification of configuration, items, represents the interests of the project manager and all groups who may be affected by any changes to the project baseline, and reviews and authorizes changes to the project baselines.

Since our project size and members size is small, configuration control board includes all the team members. That means all the CM activities are controlled, rewritten and published by all members of V2 soft.

2.2 Responsibilities

The baselines and general development schedule are determined by all team members. However, each team member is free to arrange his/her own schedule. But also they must be careful to not violate the general schedule. All team members are responsible for changes that have impact on their individual parts. However, for any changes he must confirm other member if it is related with other's topic, then the project a meeting should be arranged and the change should be discussed. If the change is approved by related team members it will be included in the new version and will be presented to Oral Dalay. For example we currently use ASP for web based design and Özkan is responsible for that, if Özkan want to design it with another language he is free, because, it is not related with other parts. But if Atilla wants to change main menu design He cannot change without discussion with Mevlut and also Çağdaş. We must arrange a meeting and Atilla must talk about new ones benefits and then it can be if they both agree with him.

3. Configuration Management Process

Prepared CMP for RAS-2005 by V2Soft team, consists of all CM activities that include all functions and tasks required. These CM activities are sub divided as following

- Identification
- Configuration Control
- Version Control
- Configuration Status Accounting
- Auditing

3.1 Identification

Functional and physical characteristics of configuration items for RAS-2005 are selected and recorded in this process. There are four configuration items that we used while developing RAS-2005:

- Hardware
- Software
- Documents
- Baselines

Hardware:

Requirements of equipments that are used for designing, developing and running project composes hardware. In our previous documentations, these are explicitly mentioned. Change in programming technology, for example Java to .NET, may cause another change in hardware. If a change needed and accepted by V2Soft team, documents updated in a suitable way for new configuration.

Software:

Used application programs, programming language libraries and such files that are needed to use for developing and deploying systems compose software. As expressed in hardware if a need cause any change in software, this is indicated in relevant documents. Continuous updates immediately processed to repots.

Documents:

V2Soft team determined a naming convention for documentations and this is applied all projects of the company. Used convention for RAS-2005 can be observed from printed reports. Deliverable documents that are approved by team members can be reached from company's web site.

Baselines:

Some important specific points constitute baselines. V2Soft team determines baselines according to control life cycle of RAS-2005. These poits are milestones of developing system.

3.2 Configuration Control

Although, we design reports and made analysis before starting development, there may be a new idea occurred among team members while implementation. Moreover, we can come across a conflict in forward phases. In that case a change request routine applied.

Submitting change request:

Change Request Form is submitted to SCM leader by a team member. V2Soft is not a very big company. All members are close each other and have a friendship between their selves. For RAS-2005 project team members make meetings at least once a week. If request does not have an emergency, may be done by worth of mouth. Otherwise e-mail and cellular phone call are preferable. These requests are noted by SCM leader and SCM Library is updated.

Request analysis:

As being team leader Çağdaş EKİNCİ analyzes change requests. While this process, all relevent documents and reports overviewed. At weekly meetings, all request obtained from members considered and investigated by other team members.

Request Approval/Disapproval:

Team members discuss collected change requests with the guidance of made request investigation. If request is very important for example prevents a big mistake or provides great efficiencies, team members agreed on the change. Then SCM Library is updated to reflect the approval and SCI is amended. If request is not very imporatant or contains some inconsistances, it is rejected. But detailed explanation of the rejection is given to submitter and he is also persuaded to rejection. Then SCM Library is updated to reflect the disapproval.

Implementing changes:

After approval of the change request, it is implemented by the developers who is resposible from changed part of the system.

3.3 Version Control

We used version control along the entire project. That is managed by CVS. Main step are as the following:

1. Team members use CVS while implementing his own code.
2. Code is tested and changed from CVS repository by CVS tools by the developer.
3. Completed code segments can be obtained by other members from CVS after writer opens it.
4. Changed code parts are alerted by CVS to its developer and it is managed.

Version numbering:

We separates changes into two parts: major changes and minor changes. And use this discrimination to number our program. Moreover we add date of change to number version. Major changes part has one digit, minor changes part has two digits and date part consists of just month and year of change. There is a "point" between major and minor changes and a "hyphen" between minor changes and date. Below scheme shows the numbering convention:

<major changes>.<minor changes> - <month and year of change>

For example:

1.07-032005

Minor changes: The SCM Library will note the bugs that are fixed.

Major changes: The SCM Library will note the bugs that are fixed. If design changes are made, the SCI document will also be updated.

3.4 Configuration Status Accounting

Communication of team members and informing others are done by the following ways:

- At least one meeting with the attendance of all team members.
- Meeting with the supervisor of the project twice in every three weeks.
- Informing via yahoo e-mail group.
- CVS server usage.

All software files are kept in the CVS server. It provides to retrieve the necessary files in a disaster situation. Also, CVS generates a warning when a change made.

If any changes accepted or some defects are faced following information is prepared and recorded:

- Definition of the completed configuration item
- Completion time of a component of the system
- Time of a change occurrence time
- Software change's detailed descriptions
- Information about the detected defects

3.5 Auditing

Functional Configuration Audit and Physical Configuration Audit will be performed. The purpose of functional audit is to verify that the development of a configuration management has been completed satisfactorily and that the configuration item has achieved the performance and functional characteristics specified in the functional or allocated configuration. We will perform functional audits at the end of development process following the completion of all the testing on the items that have been developed. We will also perform physical audits which will help us to see if a configuration management item conforms to the technical documentation that defines it.

4. Project Schedule

WEEK	RELATED DATES	Çağdaş Ekinci 120291-0	Atilla Acar 120264-7	Mevlüt Ballı 120276-1	Özkan Çelik 125562-9	RELATED TASKS
1	21 Feb - 27 Feb	Gathering data √	Design web site view √	Estimating dates √	√ √	living schedule ready / prepeare web site / implementation starts
2	28 Feb - 06.Mar	√ √ examining other software	√ √ Searching WML	√ √ Searching for PDA's	√ √	make design review / review functional specifications / identify modular design parameters / assigning development stuff
3	7 Mar - 13.Mar	Continue to his works	Continue to his works	Continue to his works	Continue to his works	1st demo to supervisor / configuration management plan / web page ready
4	14.Mar - 20 Mar	Writing CMP / Testing PDA and their usage / Try to improve security issues in design	Writing CMP / Try to built a user friendly GUI / Customer meeting	Writing CMP / Try to find gaps in our design	Building web site more secure / Adding more data to database / Testing database a with fallacies	develop code / first snap-shot of the project
5	21 Mar - 27.Mar					2nd demo to supervisor / continue to devolopment / developer testing
6	28 Mar - 3 Apr					developing continued
7	4 Apr - 10 Apr					3rd demo to supervisor / developing continued
8	11 Apr - 17 Apr					development complete
9	18 Apr - 24 Apr					4th demo to supervisor / develop unit test plans
10	25 Apr -					unit testing / integration of modules etc.

	01.May					develop integration test plans
11	2 May - 08.May					5th demo to supervisor initial release modifying code
12	9 May - 15.May					re-test units integration testing necessary modifications if any
13	16 May - 22.May					6th demo to supervisor re-test integration testing completed presentations
14	23 May - 29.May					testing complete
15	30 May - 5 Jun					7th demo to supervisor final release
16	6 Jun - 12 Jun					develop user manuals review all documentation documentation complete
17	13 Jun - 19 Jun					identify test groups develop delivery mechanism final demonstration

Everything is going to be done in the times given above in the living schedule of our team. Assignments are done weekly which are mentioned properly in the meetings and given in the meeting reports.

5. Tools and Methods for SCM

As expected every SCM activities will follow the same guidelines and methods given below in the SCM process criteria part. Every SCM meeting will include every group member. Every group member is expected to participate in the discussion. Any group member not attending the review will be notified by the SCM leader of what took place at the review. The SCM leader will oversee the discussion and will take notes of any defects or enhancements that need to be analyzed. Here is the guidelines and methods that expected to be done by the group members;

- Members should ensure that the changes in the SCM Library have been done and if any additional modifications have been incorporated.
- For assessing the technical correctness formal technical review should be done by group members.
- All group members are expected to follow software engineering standards although they are not professional yet.

- Members must be sure that all related SCI is updated regularly according to the main part.

- Members should highlight the changes they made in the SCI with the exact date and time, moreover the member name that made the change should state his/her name with this information.

- Member who made changes should be sure that the configuration item's properties will reflect the change done.

- All should inform others before and after a change done or will be done.

In addition to the rules above, the SCM team will analyze the defects or enhancements and determine their complexity, impact on the system, and priority. Once prioritized, the SCM leader will assign each item to the software engineers along with their priority. After a defect has been eliminated or an enhancement added, the software engineer will inform the SCM leader at the next SCM review. The SCM leader will take note of the correction in the SCM library.

We are not going to use a special tool because that will not be necessary for SCM team although access to a central database that all group members can access would be preferable to cut down on time and duplication of errors.

6. Plan Optimization

As a result of incremental improvements in RAS2005, the configuration management plan and the related approaches such as development and living schedule will continue to evolve. This document is the final form for now but it can be updated if any necessity is needed. This document is designed so that the future applications and the works will be done more professional and makes our members more adapted to this kind of jobs in their future work life. For now this plan will control the development phase of RAS2005 of our team V2SOFT.