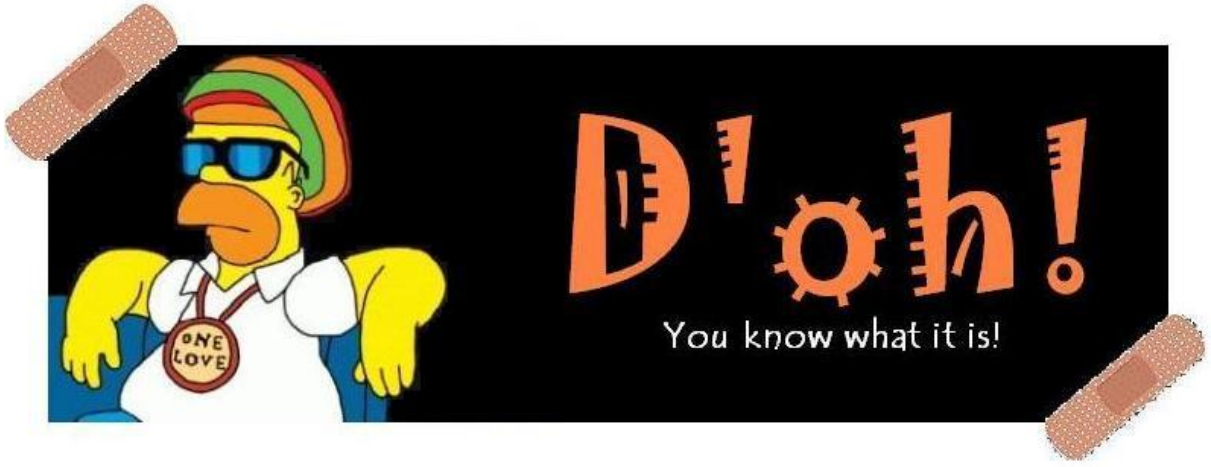


**GENG 492**

# **Configuration Management Plan**



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# 1. INTRODUCTION

## 1.1. Purpose of the Document

One of the essential parts of a software development process is the Configuration Management Plan. The things that were planned in the design part of the project can change in the implementation part. The side effects or consequences of these modifications are inevitable. As Murphy's law states, "If anything can go wrong, it will.". This is why we have to be prepared for the consequences of our actions. The main function of the configuration management plan is to be ready for action to resolve any kind of problems we would experience before it is too late.

CMP also focuses on controlling multiple developers working on the same code at the same time, targeting multiple platforms, supporting multiple versions, and controlling the status of code.

## 1.2. Scope of the Document

This document is the configuration management document of D'oh! This document consists of the procedure that we would follow when we need a change or a modification in the project, the main roles of the group members and our problem management technique.

## 1.3. Definitions, Acronyms and Abbreviations

<b>CM</b>	<b>Configuration Management</b>
<b>CMP</b>	<b>Configuration Management Plan</b>
<b>CI</b>	<b>Configuration Item</b>
<b>CCB</b>	<b>Configuration Control Board</b>
<b>TT</b>	<b>Testing Team</b>
<b>DT</b>	<b>Developer Team</b>
<b>SCM</b>	<b>Software Configuration Management</b>
<b>SCMP</b>	<b>Software Configuration Management Plan</b>
<b>CSA</b>	<b>Configuration Status Accounting</b>

SCR	Software Change Request
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## 1.4. Document References

- D'oh! Requirement Analysis Report
- D'oh! Initial Design Report
- D'oh! Detailed Design Report
- Software Configuration Management Slides, METU Computer Engineering
- IEEE Standard for Software Configuration Management Plans

## 1.5. Document Overview

The main parts of the document are:

1. Introduction
2. The organizations CM framework  
Explanation for D'oh! to accomplish CM, roles and responsibilities of each D'oh! member will be among the concerns of this part. The tools and the infrastructure of CM also take part in this section.
3. The CM process  
In this section configuration tools are discoursed in detail. Also configuration of status accounting and auditing are explained.
4. Project schedules  
CM milestones are identified.
5. Project resources
6. Plan optimization

## 2. THE ORGANIZATIONS CM FRAMEWORK

This part is about our organizational structure.

### 2.1. Organization

Not being a crowded company, D'oh! has a relatively simple organization schema.

There are three main group in a software configuration management which are Configurational Control Board (CCB), Testing Team(TT) and Developer Team(DT). A Program Director is also needed for management.

Certain roles are given to each member of D'oh! company. However, these roles are not strictly defined which means everyone is qualified enough to be able to do the others' job when there is a need for that.

The groups' duties and members:

- Program Director: Resource and time management. Buğra Oktay, being the leader of the D'oh! organization, also serves as the program director.
- CCB : Supevising all of the CM activities. Everyone in D'oh! is a member of CCB.
- TT : Generating SCRs, ensuring the implementations of SCRs'. Özkan Akman, with his high questioning and testing ability, is our one manned army of testing.
- DT : Making change requests, implementing the modules, implementing the change requests made by testing team. Buğra Oktay, Güven İşcan, Gizem Kılıç are the skillful designers of this team.

## **2.2. Responsibilities**

- CCB Member Responsibilities :
  - Approving or rejecting SCRs
  - Updating CM schedule
  - Identifying CIs
- TT Member Responsibilities :
  - Informing the group members about SCRs
  - Ensuring the implementations of SCRs
- DT Member Responsibilities :
  - Commenting developments

- Uploading updated files
- Keeping up with the schedule

### **2.3. Tools & Infrastructure**

D'oh will employ CVS which brings ease to keep track of modifications in the project code. By the use of CVS, the complete copy of the project's current version is stored and all the changes done are kept as change history. The beneficial part of CVS is that it helps multiple programmers to work in the same project without disrupting each other's work.

## **3. THE CM PROCESS**

### **3.1. Identification**

The main source code files, database scripts, documentation, test data and all of the CIs are in CM process.

We gave version numbers to the CIs and when a change occurs in a CI, we update the version number of that CI.

The main parts of our project is:

1. Embedded Side
2. Mobile Side
3. Web Side
4. Management Side
5. Unit Testing Side
6. Installation Side

### **3.2. Management and Control**

- Identification and Documentation : When a group member recognizes a need of change about some part of the project, he/she documents the change request. While creating the document he/she explains the reason of the change, the list of the CIs that affected from this change and the priority of the change
- Analysis and Evaluation : All of the members in the group review the request.

- Approval : After discussing, the offer of change is accepted or rejected.
- Verification and Implementation : If the request of change is accepted, the owner of that part implements the change. After that, it is tested by the group.

### **3.3. Configuration Status Accounting**

The CSA is used to inform all the group members, assistant and the teachers about the status of the project. CSA includes recording and reporting the status of project CIs.

The management of CSA is done through reports including the changes of all the necessary information and the responsible person from the part that changed.

To complete that task, we use our web site and e-mails.

### **3.4. Auditing**

In the auditing part, the evaluation of the project is done and depending on the results of the evaluation, the actions are taken.

In the project, auditing is done after important changes. Moreover, any member can ask an audit in the group meetings.

The three types of auditing are :

- Functional audits : These are done to see the performance by testing the software.
- Physical audits : These are done to be sure that the software consists all of the required components, documents and data.
- Process audits : These are done to compare the manner in which the end product is produced to the written procedures.

## 4. PROJECT SCHEDULES – CM MILESTONES

09.03.2009	CMP Delivery
30.03.2009	Finalization of web part
30.03.2009	CMP Update
20.04.2009	Finalization of microcontroller part
20.04.2009	CMP Update
04.05.2009	Finalization of mobile part and start of integration, debugging,
15.06.2009	Releasing the final product

## 5. PROJECT RESOURCES

Composing of several parts, our project makes use of several programs and environments to accomplish. As mentioned earlier CVS will be used to keep track of the changes in the project code. Also the implementations will be done in Visual Studio 2008, NetBeans IDE, PIC C Compiler.

Manpower is the other vital part of our resources, our group consists of 4 highly qualified programmers. With the help of planning and high motivation, there should exist no single project D'oh cannot handle.

## 6. PLAN OPTIMIZATION

The members of D'oh arrange meetings regularly, thus decisions can be made quickly regarding the progress of the project. Plan optimization will be analyzed and updated again and again after each milestone.