*Tuesday, 4 March 2014*

Design Document

*Team Fruitcakes*

# 1. Purpose

When baking, it is often best to stay close to the oven, and monitor the cake often. This limits the users freedom of movement and prevents them from focusing on other important tasks. The purpose of the project is to create a device to enable users to view the inside of an oven and monitor temperature and timers remotely. The registered users of the PieChecker will be able share their baking results via social media.

# 2. Reference Documents

|  |  |  |
| --- | --- | --- |
| **name** | **reference** | **version / date** |
| Trello, task management tool | <https://trello.com/b/fEFTmiHm/team-fruitcakes> | n/a |
| User Requirements document | <https://docs.google.com/document/d/1VA43jzCAxjGBVZ2fOkhf5VR11us-Y-Rx6Dw-e0sq6Xs/edit> | draft 1, Feb 26, 2014 |

# 3. Management

## 3.1 Organization

Team Fruitcakes is a team of seven students from Gothenburg University. The team is part of the first year, spring semester 2014 project course within the Software Engineering and Management program. This course is taught by Imed Hamouda and various supervisors.

## 3.2 Tasks

Our project is divided up into four major components: Raspberry Pi, Web Server, Web Application and Android Application. Each task belongs to one of those four components. Tasks can be claimed by our group members during our weekly SCRUM sprint planning. Claiming a task means taking responsibility for it’s successful completion, it does not necessarily mean creating the solution on ones own.

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## 3.3 Roles and responsibilities

For this project we are using the SCRUM approach. Our supervisor, Einar Sundgren, is the product owner and we are the developers. Within our group Saipirun Sanprom has the role of SCRUM master. She is responsible for making sure the team is not impeded from completing a sprint and if needed, she is our contact with the other stakeholders in the project *(outside of our weekly sprint planning)*.

## 3.4 Quality assurance estimated resources

On average, 15% of our time resources are consumed by testing. When a group member completes a task, it is his / her responsibility to appoint a tester. The tester is a member of our team who did not participate in completing the task. By using the acceptance criteria belonging to the task, the tester can verify the solution has been correctly implemented and report his / her findings back to the person responsible. If a task is not completed before the end of the sprint, impediments are documented and the task is replanned. Final quality assurance is done by our supervisor and / or lecturer, Imed Hamouda.

# 4. Tools, techniques and architecture

For our version control, we use a Git repository hosted on Github. For our task management we use Trello. We also make extensive use of Google Drive applications, like Docs, Spreadsheets and Drawings. Within our project we make use of web technologies to communicate between our major components. We use UDP streams for our live video feeds, and TCP for our text communication.

# 5. Documentation

## 5.1 Minimum documentation requirements

## 5.2 Software requirements description

PI checker the essential product with the basic functionalities of users login, online broadcasting and photos taking for cooker. It can send constantly changed image throw home internet till specific equipment such as TV, computer or mobile phone.

The Pi should be:

* Sending an image capture every 5 seconds to the server, which the user then sees on either its computer screen, tablet, or mobile phone. It should also be able to send timestamps with images.
* Getting input via a probe which is connected to the raspberry pi.
* Setting a timer that signals when the food is ready, this timer is displayed on the screen.

The website should have:

* A login screen for the active users.
* Homepage with a collage of images received from users. This would act as a “running” collage created by a gif creator, which allows many images to be displayed over time.
* Registration for users and their devices, allowing them to sign in and see the stream of their selected Pie Checker.
* The function to display captured images, temperature, and timers. The images and temperature comes from the connection from the server to the pi. While the timers will be set by the users, whom are alarmed when the timer countdown is finished.

The server should be:

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