Milestone 4 Plan

for

Subgroup 1

Alex Egan
Filimoni Lutunaika
George Sainsbury
Xiaodong Cui

Contents

– – – –

List of Figures

1 Introduction

1.1 Purpose and Scope

Milestone 4 follows on from the development tasks undertaken during Milestones 1 to 3. For the current development sprint, Subgroup 1 will proceed with developing solutions to the following Tickets, which were initially investigated in Milestone 3:

Ticket 131 - Use real disk usage instead of byte size throughout the web application

We are now gathering disk space usage (number of occupied 512-byte blocks) along with the size of each file. This is a more precise metric for determining where disk space is used, which probably is Earth's main purpose at this time. Therefore, the GUI should use this value instead in all situations. (Maybe it should be configurable in earth-webapp.yml.)

Ticket 174 - Look into making Earth release a gem

It would allow us to automatically deal with the dependencies such as:

- the gems:

  rcov

  rails

  postgres

Ticket 186 - Remove feature for Earth daemon

The remove command for earthd needs to be implemented. It should remove a directory so that it is no longer monitored on the local host. Also, it should allow for historical tracking of files so that it can be seen where files have been deleted.

In addition, Subgroup 1 is also planning to investigate and fix the following Ticket:

Ticket 75

Implemented listing by either name OR (with a slight modification) size. Future enhancement should consider dynamic sorting wherein clicking the field title sorts the record according that particular field.

1.2 Plan Review

This plan will be reviewed at the end of the Milestone 4 development 'sprint'. This plan will be updated if there is a radical change to the requirements of any Milestone 4 task. The changes can be made by any of the Subgroup member who should then inform the Subgroup leader about these changes. However, significant changes that have a system-wide effect will be deferred to the next milestone to minimize any disruption to the other tasks of the current milestone.

2 Organisation for Milestone 4

2.1 Task Allocations

Tasks for Milestone 4 are being allocated as follow:

2.1.1 Ticket 75: Sort by name or size

Description Alex is being allocated this task which enables dynamic sorting of listed directories and files under the navigation tab. The Group had initially investigated and implemented a solution that sorted the listing either by name or (with a minor modification) size.

Subtasks

1. Design and code the dynamic sorting of record listing. (7hrs)
2. Test and integrate solution to the Subgroup 1 codebase. (2hrs)
3. Update the Earth Trac system. (1hr)

Total Time Estimate 10hrs

2.1.2 Ticket 131: Use real disk usage instead of byte size

Description Cui is being allocated this task which involves modifying the web interface to display the real disk usage instead of the current byte size values. He had implemented some highly fragmented solutions and is expected to produce a relatively modular and generic implementation.

Subtasks

1. Investigate potential solutions. (24hrs)
2. Design and code the most efficient solution. (40hrs)
3. Test and integrate solution to the Subgroup 1 codebase. (8hrs)
4. Update the Earth Trac system. (1hr)

Total Time Estimate 73hrs

2.1.3 Ticket 174: Creating the Earth Gem

Description George is being allocated this task which involves implementing a Gem for the Earth web application. This will be a continuation of the task he undertook during Milestone 3 wherein he investigated and partly implemented the Earth Gem.
This revision of the Earth Gem will be able to be installed from, include the documentation files and he will test the installation via a web source.
The availability of this Gem will have a significant impact on the productivity of developers as less resources (time) is required to modify and configure the Earth application.

Subtasks

1. Refamiliarise with the ruby gem specification syntax and reassess progress from Milestone 3. (2hr)
2. Code the implementation of the gem. (1hr)
3. Test whether the implementation of the gem can install and contains all the relevant files. (3hrs)
4. Try to upload the gem to a location so "gem install" can be used. (4hrs)

Total Time Estimate 10hrs

2.1.4 Ticket 186: Remove Feature of Earth Daemon

Description Fili is being allocated this task which entails implementing the Earth remove feature. This task was investigated by the Group in Milestone 3 and had to be deferred due to its relatively heavy resource requirements.

Subtasks

1. Investigate the existing add feature of the daemon. (8hrs)
2. Identify the relevant components of the remove feature. (16hrs)
3. Design and code an effective implementation of the remove feature. (40hrs)
4. Test and integrate solution to the Subgroup 1 codebase. (16hrs)
5. Update the Earth Trac system. (1hr)

Total Time Estimate 81hrs

2.2 Scheduling

The milestones and tasks are shown graphically in Figure 1 below. This figure shows the relative times between the deadlines of the tasks required and also shows the estimated time for the completion of each individual tasks.

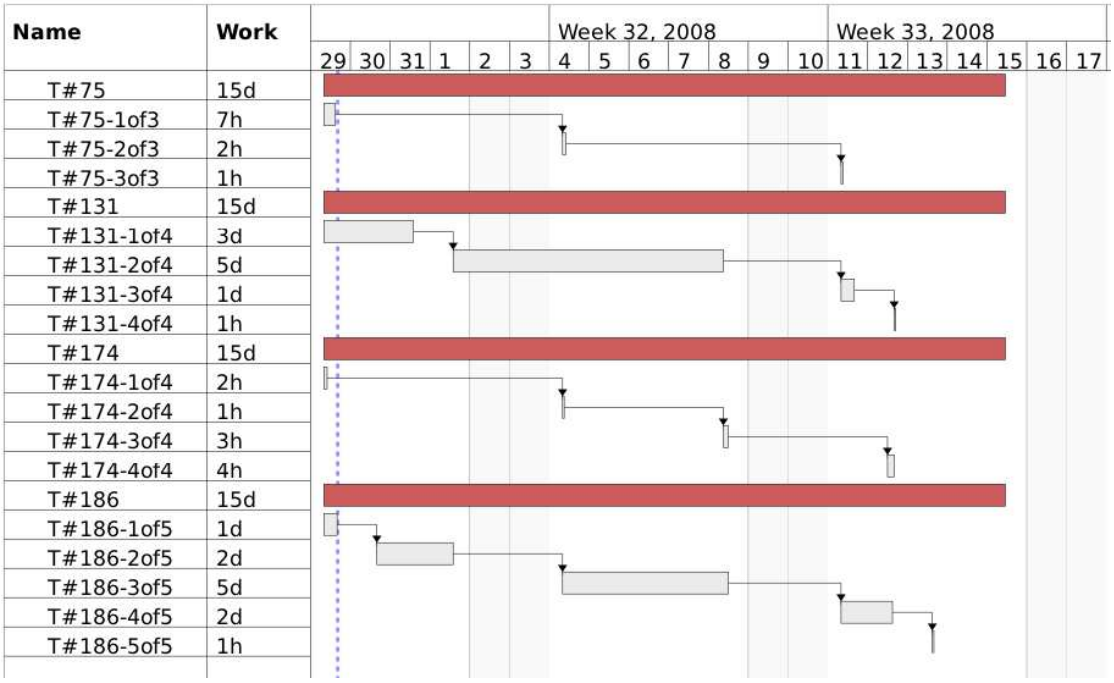

Figure 1: Gantt chart of tasks for Milestone 4

2.3 Resource Allocation

As described in Section 1.1, resources (developers) will be allocated to each task as follow:

- **Ticket 75:** Alex Egan
- **Ticket 131:** Xiaodong Cui
- **Ticket 174:** George Sainsbury
- **Ticket 186:** Filimoni Lutunaika

If a task is completed early, or it is noted that less people are required to complete a task on schedule, they will be reallocated to other tasks.

2.4 Source Control

2.4.1 Task Completion Criteria

To ensure the successful integration of each allocation tasks into the Subgroup repository, the member responsible will have to make sure that at least one of the other Subgroup members can successfully duplicate the end results or outcome of the task.

Upon satisfying the above requirement, the member responsible can then make a pull request to the Subgroup's gitHub leader to upload the solution onto the Subgroup's git repository for the actual integration testing of the Subgroup's collective solutions.

2.4.2 Git Repository Process

Each Subgroup member is expected to follow the git repository procedures outlined in the *Repository Process Document for Earth*.

2.4.3 Testing Process

Each Subgroup member is expected to follow the testing process procedures outlined in the *Testing Process Document for Earth*.

2.5 Administration

In addition to the assigned tasks for this Milestone, the roles of Git Leader and Documentation Person will be rotated amongst the Subgroup 1 members at every milestone. This will help to ensure that each member gets a chance to take on extra responsibilities with the view of broadening their individual skills as a software developer.

2.5.1 Git Leader

For Milestone 4, Cui will be in charge of managing the repository for Subgroup 1. This includes ensuring that the Milestone 4 solutions undergo integration testing before being committed onto the Subgroup 1 repository.

2.5.2 Documentation Person

For Milestone 4, Fili will oversee the documentation requirements for Subgroup 1, which mainly includes setting meeting agendas and organising progress update meetings.

3 References

Sommerville, I. *Software Engineering*, 8th Edition, Addison-Wesley, 2007

Earth Project, *Ticket 75* Retrieved from *http://open.rsp.com.au/projects/earth/ticket/75* on 29/07/2008.

Earth Project, *Ticket 131* Retrieved from *http://open.rsp.com.au/projects/earth/ticket/131* on 29/07/2008.

Earth Project, *Ticket 174* Retrieved from *http://open.rsp.com.au/projects/earth/ticket/174* on 29/07/2008.

Earth Project, *Ticket 186* Retrieved from *http://open.rsp.com.au/projects/earth/ticket/186* on 29/07/2008.

Egan, A and Bamogaddam, M.,*Testing Process Document for Earth* Egan, A and Bamogaddam, M., First Edition, 2008.

Egan, A and Bamogaddam, M.,*Repository Process Document for Earth* First Edition, 2008.

END