

# Initial Plan

Social Media Visualisation Tools and Techniques

M.R.Jones

Supervisor: N.J.Avis

Moderator: K.Sidorov

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## Initial Plan

### Social Media Visualisation Tools and Techniques

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#### **Project Description**

This project is intended to work with the research that the Cardiff School of Computer Science and Informatics do alongside the School of Social Sciences at Cardiff University to create a toolkit of techniques that can be used in the harvesting, analysis and visualisation of social media content. I will be looking at content such as that that posted on services like Twitter and Facebook. The sort of material that I could be looking at could be issues relating to tension indicators, which may prove useful in defining geographical areas of unrest or unrest within specific demographics of the population. This project intends to provide a software infrastructure for supporting data collection and analysis (covering both data analytics and visualisation) from real time on-line sources.

It is intended that Social Science researchers would be able to use these tools for visualising and analysing social media content and to aid them in choosing appropriate techniques and ways to represent data for the task they are carrying out.

Tools implemented within the project could ideally be integrated into the larger COSMOS (Cardiff Online Social Media Observatory) initiative and could help highlight the advantages and disadvantages of existing visualisation toolkits which could be used by Social Science researchers.

The project will involve conducting a survey of the currently available visualisation tools and analysis techniques and I will be looking to determine their capabilities for use and the types of data which they may be applied too.

There will hopefully be some scope within the project to investigate a selection of these visualisation and analysis techniques further and to develop software that would allow these techniques to be harnessed within the proposed system.

## Aims and Objectives

My aims and objectives for the interim report of this project are:

- To look at and evaluate the different methods that are currently available for visualising and analysing the information and data that is present on social networking web services
  - Looking at different types of data, e.g. Geo Data
  - Looking at how different visualisations can be applied to this data
- Decide which visualisation techniques and analysis methods work best for each type of data and which is most likely to help a researcher in their field of study
- Look at how using different API's (provided by Twitter, Google etc.) can benefit the retrieval and basic visualisation of information on the web
- Produce a solution for the type of toolkit that I could look to develop for this project to aid with Social Science Research
- Look at how the system that I develop for this project could in future be integrated into the larger work being carried out by COSMOS (Cardiff Online Social Media Observatory) at Cardiff University, and how it could benefit the School of Computer Science's work with the School of Social Sciences

My aims and objectives for the final report of this project are:

- Develop a system to aid Social Science researchers in choosing an appropriate visualisation technique to use for their selected dataset:
  - Provide thumbnail views for the user of what different types of visualisations available could look like for their data set
  - Thumbnails will be roughly generated to give an impression of what the visualisation may look like
  - Allow users to select, by clicking on a thumbnail, a visualisation technique which will then be applied fully to their data set for their research purposes

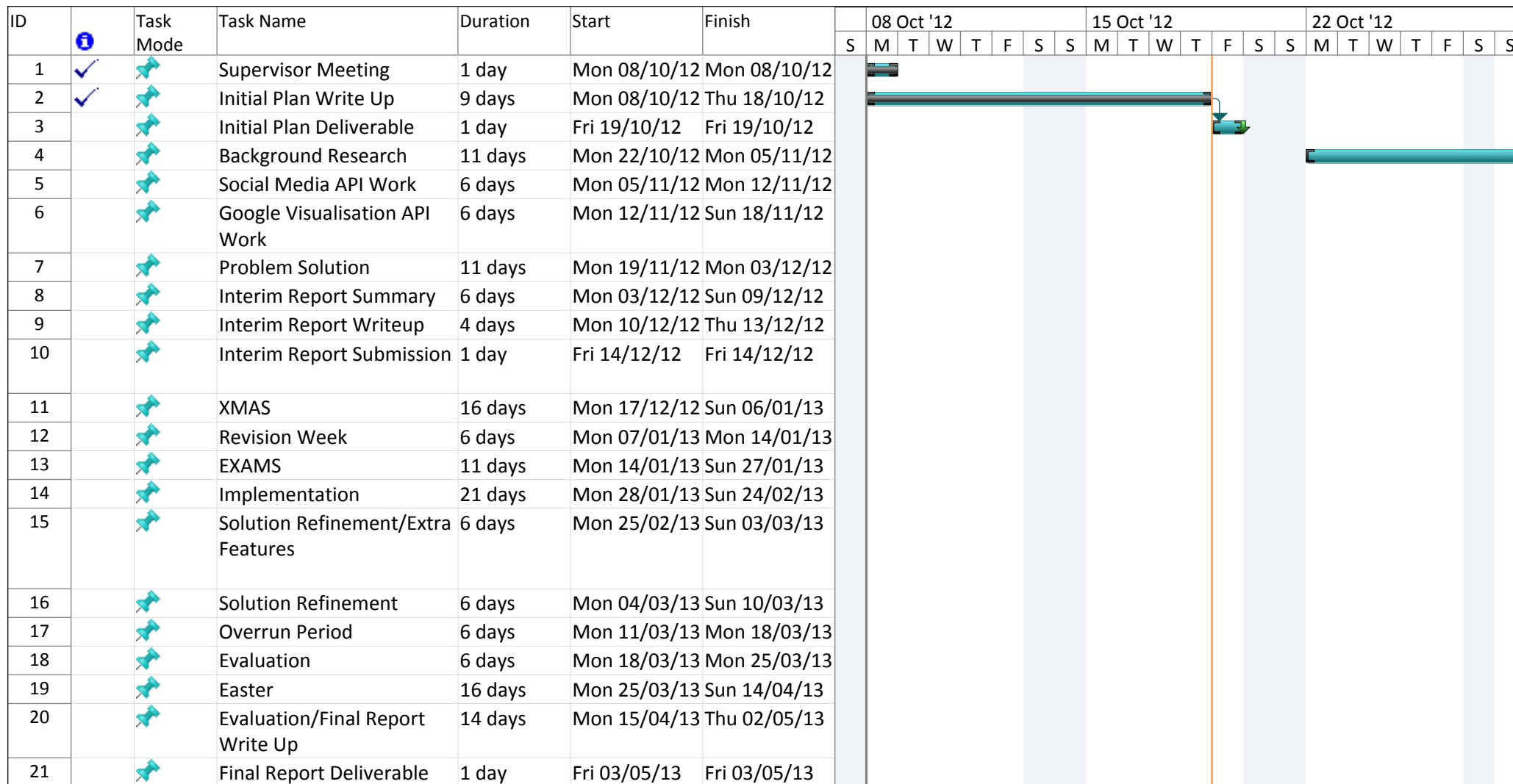
- Allow the developed system to be adaptive in learning what visualisation techniques are selected most often by Social Science Researchers and on which types of data;
  - The system could then provide a list of recommendations based on the most frequent selections and display these to help other researchers who may be using similar types of data sets
- Test the developed application with Social Science Researchers to gauge feedback into how the system works and if the types of visualisations are appropriate for the sorts of data and types of research that they are carrying out;
  - Look at conducting a study into how they would carry out their research before the tool that I hope to develop would be available, and then compare this to how they select visualisation techniques once this developed software has been made available to them
- Look at developing an ontology for the purposes of Social Science Research and social media visualisation, an ontology being something that defines a common vocabulary for researchers wishing to share information within their domain

## Time plan/Work plan

Week Beginning	Task	Notes
08/10/12	Meetings with supervisor	Meet with supervisor to get a better overview of the project and to start to build up some aims and objectives
15/10/12	Initial Plan Write Up	Write up the initial plan of the project with aims and objectives and a work plan
<b>19/10/12</b>	<b>Initial Plan</b>	<b>Submission Deadline</b>
22/10/12	Background Research	Research into the work that has already been carried out with COSMOS and how this project relates to their research
29/10/12	Background Research	Research into systems that are currently available for analysing and visualising data from social media. Look at advantages and disadvantages of such systems
5/11/12	API Work for Social Media	Look at how I could use the API's provided by social media providers to harness their data
12/11/12	API for Google Visualisation	Look at how I can use the API's provided by Google to provide basic visualisation techniques
19/11/12	Problem Solution	Start to build up a picture of my solution to the given problem
26/11/12	Problem Solution	Refine how I am going to solve the task, taking into account work already performed with COSMOS
3/12/12	Interim report summarisation	Start to summarise my findings and gather all information I wish to include in my interim report
10/12/12	Interim report write up	Write up the interim report to the specifications require
<b>14/12/12</b>	<b>Interim Report</b>	<b>Submission Deadline</b>

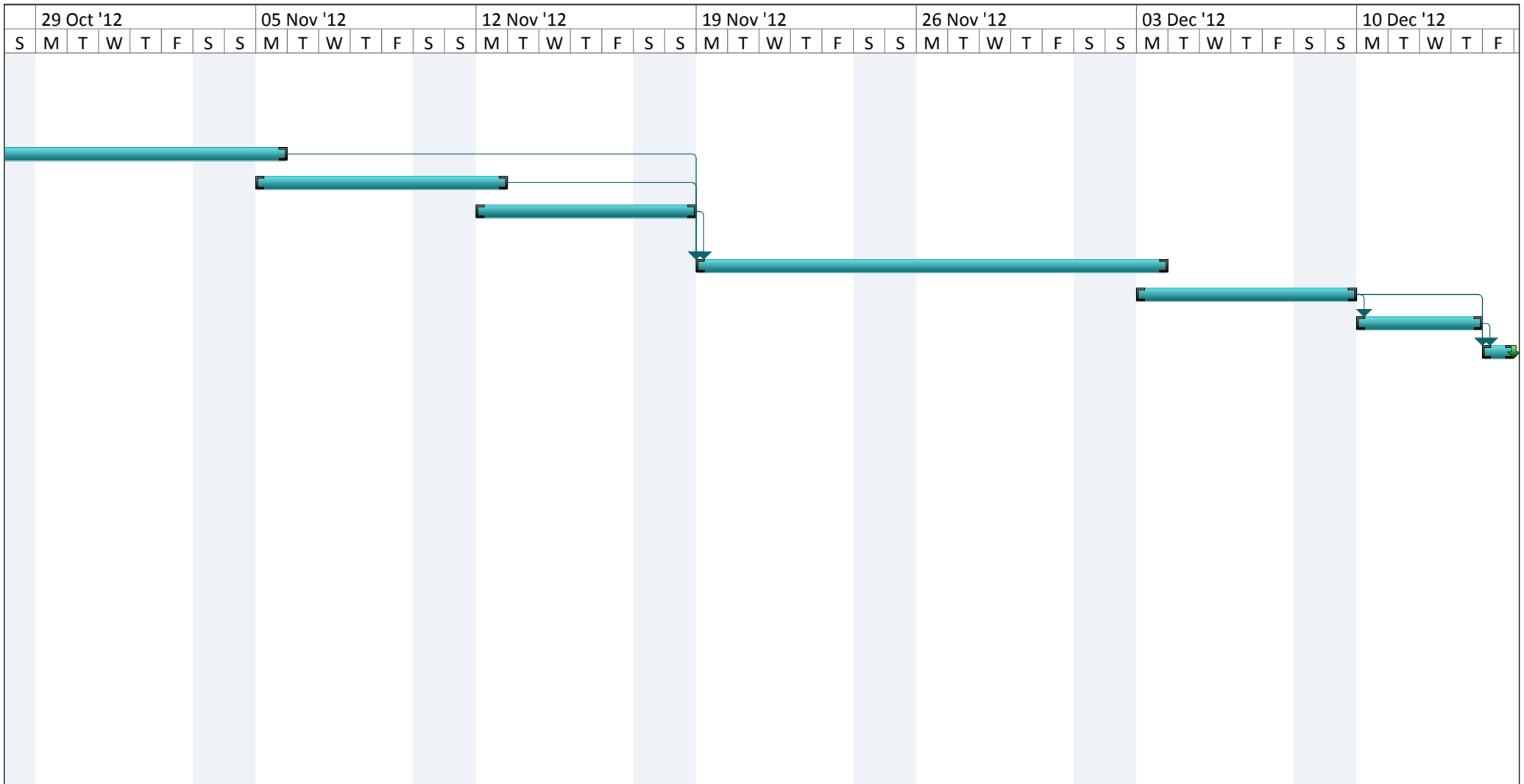
17/12/12	<b>XMAS</b>	
24/12/12	<b>XMAS</b>	
31/12/12	<b>XMAS</b>	
<b>7/1/13</b>	<b>Revision Week</b>	<b>Limited Scope for work here</b>
14/1/13	<b>EXAMS</b>	<b>Limited scope for work here</b>
21/1/13	<b>EXAMS</b>	<b>Limited scope for work here</b>
28/1/13	Implementation	Implementation of retrieval of information from social media services
4/2/13	Implementation	Work on developing system to provide thumbnails of visualisation techniques
11/2/13	Implementation	Work on developing system to provide thumbnails of visualisation techniques
18/2/13	Implementation	
25/2/13	Solution Refinements/Extra Features	Any features above and beyond the specification, also refine what is already working within the system
4/3/13	Solution Refinements	Refining the current developed system to make sure things work as intended and are stable
11/3/13	Overrun Period	Time to use if earlier implementation stages have overrun
18/3/13	Evaluation of Work	Start to evaluate what I have achieved throughout the project
25/3/13	<b>Easter</b>	
1/4/13	<b>Easter</b>	
8/4/13	<b>Easter</b>	
15/4/13	Evaluation/Final Report Write Up	Gather all information needed for the final report of the project
25/4/13	Final Report Write Up	To author report on project
29/4/13	Final Report Write Up	To author report on project
<b>3/5/13</b>	<b>Final Report</b>	<b>Submission Deadline</b>
5/5/13		
13/5/13	<b>Exams</b>	

# Gantt Chart - Project Time Plan



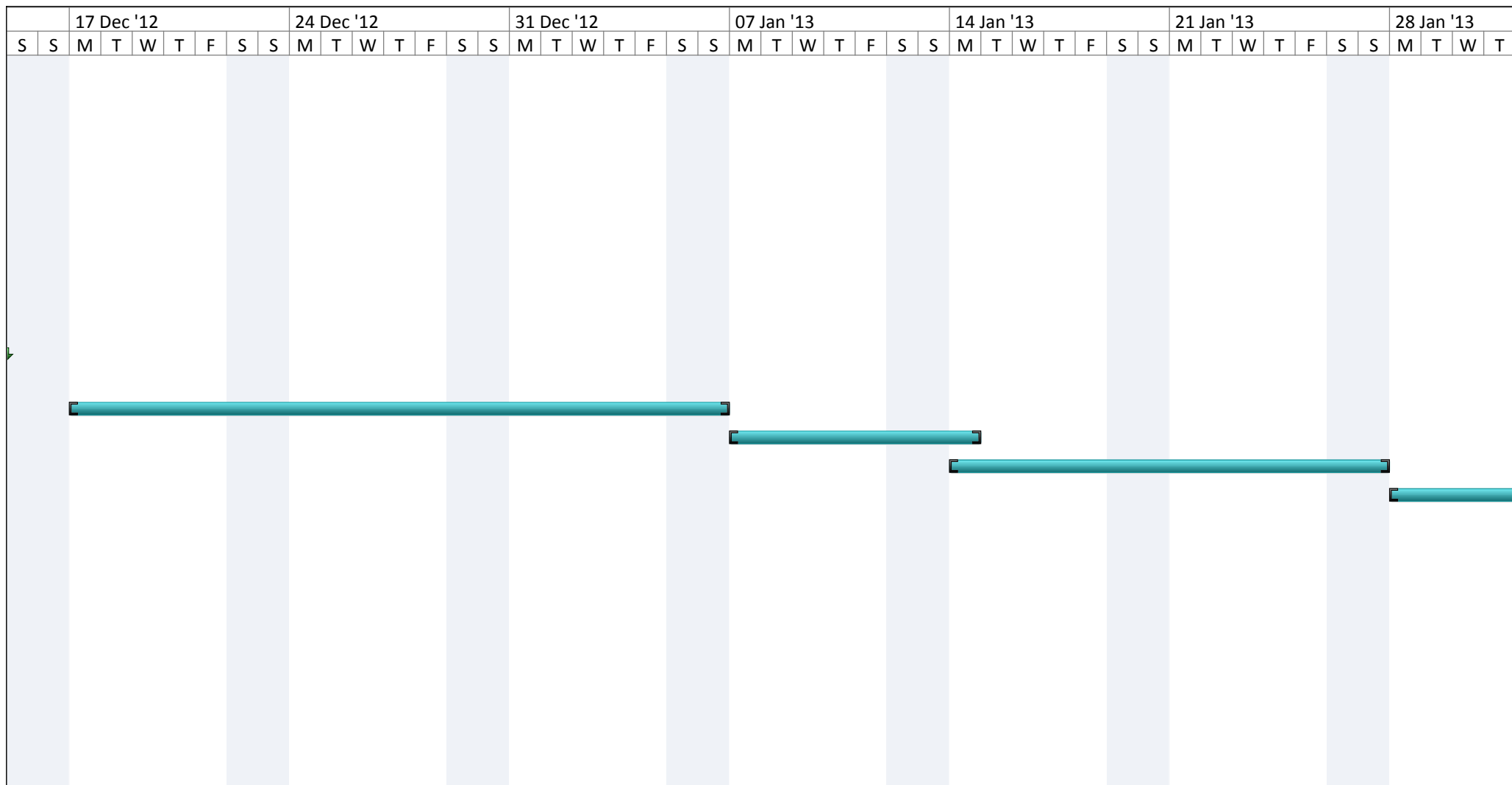
Project: FYP Gantt Chart  
Date: Fri 19/10/12

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Deadline	
External Tasks		Duration-only		Progress	



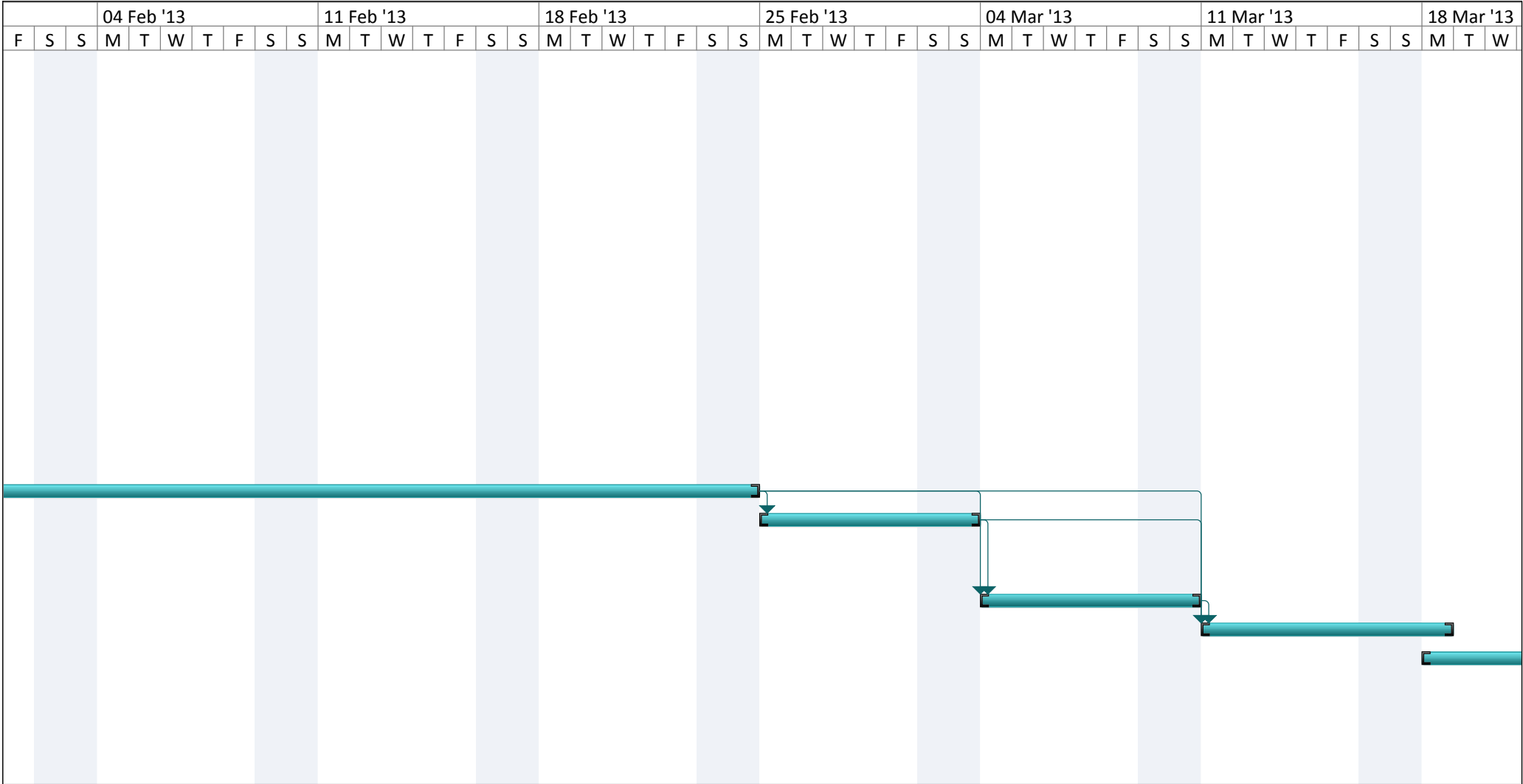
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