THE RASPBERRY PI INITIATIVE

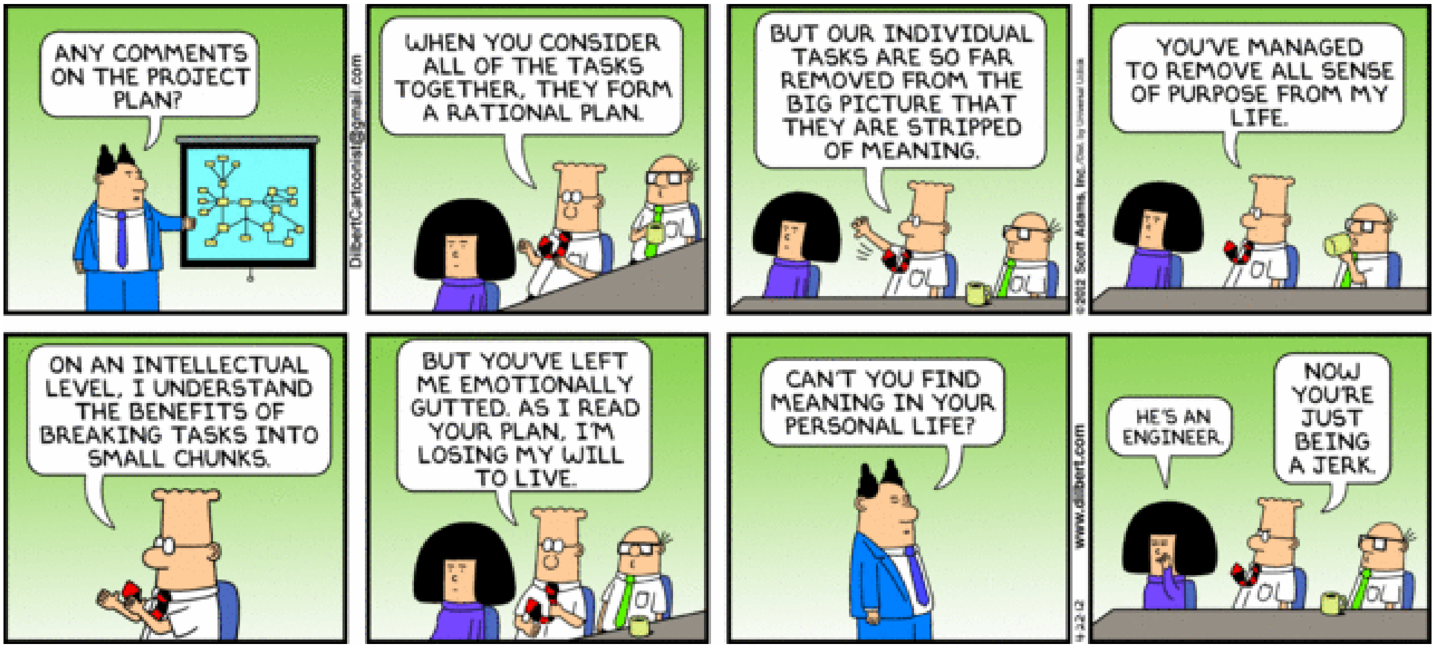
Within the computer programming profession, programmers often have to deal with tight deadlines and schedules. Customers need to know when their software will be completed and programming teams need to know when different components of the software will be ready. In order to stay on task and meet deadlines, large software programs are broken up into smaller tasks, and **milestones** are identified. This also helps organizing and planning large projects.

PROJECT PLANS

Project plans can take on several different forms. The important thing is that the plan accurately lays out what the project will accomplish, all of the tasks that are involved, and when these tasks will be completed. The project plan can also identify the individual or group that will be responsible for each subtask.

Some individuals or groups don't like making project plans because they think that this will lock them into one path, even though as they work, they may find a better alternative. You shouldn't let this stop you, think of the project plan as a DYNAMIC document, it may change as your progress through your project. That is okay, it is better to have a plan that changes than no plan at all, especially in projects involving groups.

For the purpose of the Raspberry Pi initiative, you can use the GANTT charts or PERT charts to plan your project, but you should also have an accompanying, written document that outlines a larger view of what you're trying to accomplish. Your GANTT or PERT chart will outline the specific tasks, which your project plan will include, but your project plan should also include a description of what the final project will look like.


ANY COMMENTS ON THE PROJECT PLAN?
DilbertCartoonist@gmail.com
WHEN YOU CONSIDER ALL OF THE TASKS TOGETHER, THEY FORM A RATIONAL PLAN.
BUT OUR INDIVIDUAL TASKS ARE SO FAR REMOVED FROM THE BIG PICTURE THAT THEY ARE STRIPPED OF MEANING.
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YOU'VE MANAGED TO REMOVE ALL SENSE OF PURPOSE FROM MY LIFE.
ON AN INTELLECTUAL LEVEL, I UNDERSTAND THE BENEFITS OF BREAKING TASKS INTO SMALL CHUNKS.
BUT YOU'VE LEFT ME EMOTIONALLY GUTTED. AS I READ YOUR PLAN, I'M LOSING MY WILL TO LIVE.
CAN'T YOU FIND MEANING IN YOUR PERSONAL LIFE?
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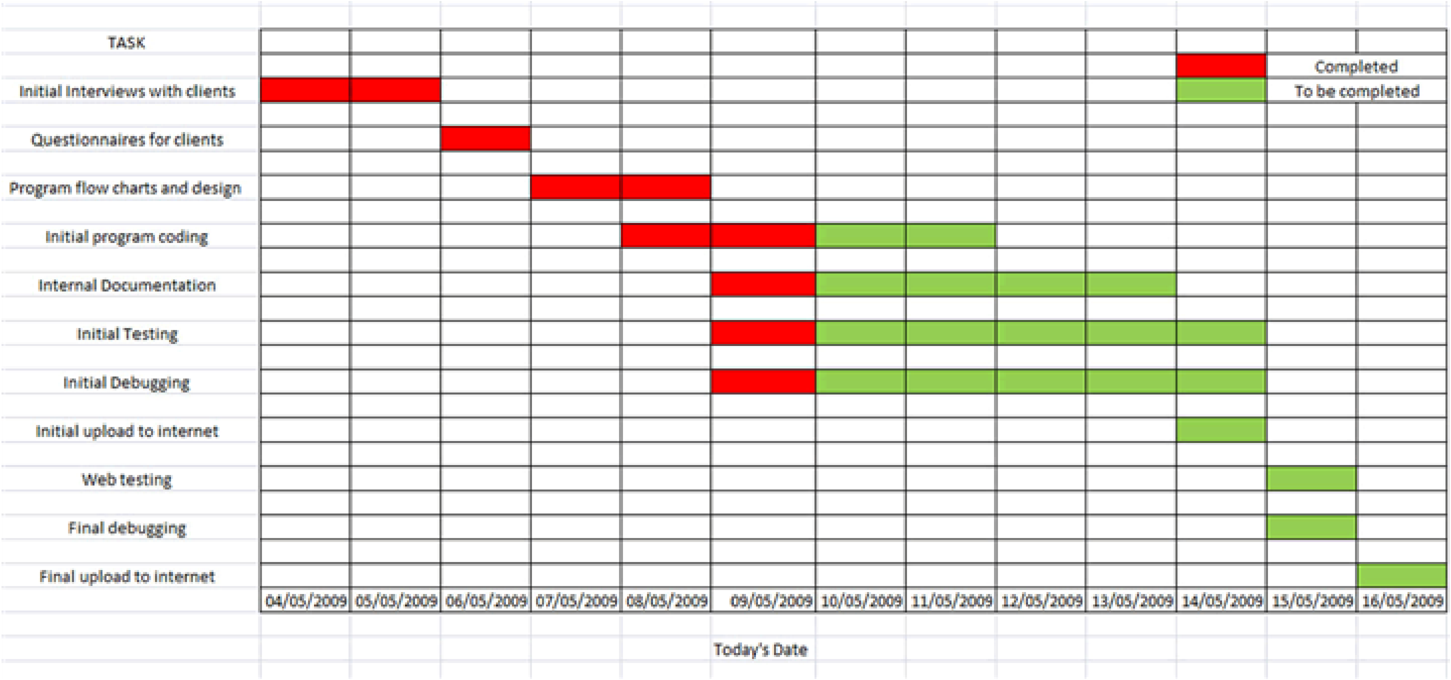
HE'S AN ENGINEER.
NOW YOU'RE JUST BEING A JERK.

A **milestone** is a major point, or highlight, in the project process. It demonstrates that progress is being made, and that certain tasks have been completed. Examples of milestones in a person's life might be graduating high school, or moving into their own apartment. Examples of milestones in a software project might be completing the design flow chart, or completing the testing phase.

GANTT CHARTS:

GANTT charts are often used by programming teams to plan and monitor the progress of a large project. The GANTT chart outlines the major tasks that need to be completed, or the milestones that need to be met. The chart also outlines the work that has been completed on a certain task, as well as the work that still needs to be done.

Below is an example of a GANTT chart for a large software project:



🟥 Completed
🟩 To be completed

TASK	04/05/2009	05/05/2009	06/05/2009	07/05/2009	08/05/2009	09/05/2009	10/05/2009	11/05/2009	12/05/2009	13/05/2009	14/05/2009	15/05/2009	16/05/2009
Initial Interviews with clients	🟥	🟥											
Questionnaires for clients			🟥										
Program flow charts and design				🟥	🟥								
Initial program coding					🟥	🟥	🟩	🟩					
Internal Documentation						🟥	🟩	🟩	🟩	🟩			
Initial Testing						🟥	🟩	🟩	🟩	🟩	🟩		
Initial Debugging						🟥	🟩	🟩	🟩	🟩	🟩		
Initial upload to internet											🟩		
Web testing												🟩	
Final debugging												🟩	
Final upload to internet													🟩

Today's Date

GANNT chart.

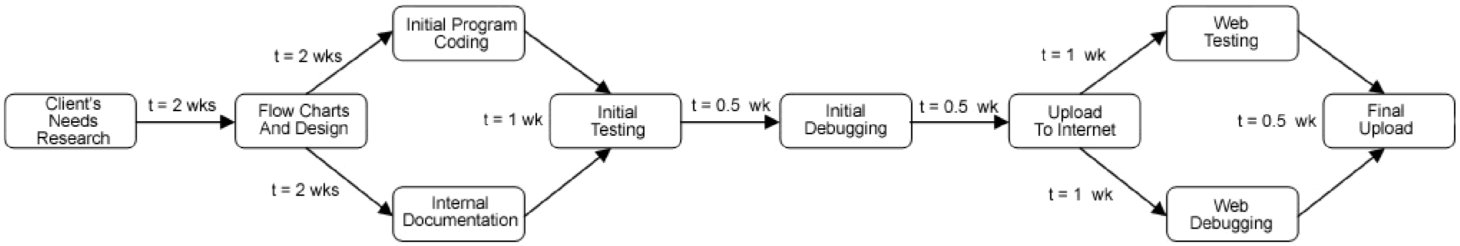
PERT CHARTS:

PERT charts provide another way of planning and keeping track of project milestones. The major milestones are listed in a diagram format, with lines connecting each one. Although flow charts had very formal rules for the shapes of each of the elements, PERT charts are usually created with fewer rules.

Although there are slightly different varieties of PERT charts, usually PERT charts include the amount of time it will take to reach each of the milestones. In the PERT chart below, the amount of time required for each milestone is communicated by indicating the amount of time required above each line. The “t = 2 wks” text means “time required = 2 weeks”.

The chart divides into more than one path, when two milestones can be reached at the same time. For example, the program coding and the internal documentation can be done at the same time, so the chart divides to indicate these two things occurring simultaneously.

Below is an example of a PERT chart for a large software project:



While GANTT and PERT charts may seem like fancy ways of staying on schedule and keeping track of milestones, programmers use many other methods to plan and keep up to date with large projects. If the programmers are communicating using email or the Internet, then shared calendars can either be posted on a website, where team members can log in and alter the calendar, or it can be sent to all team members via email, and resent to everyone every time there is an update.

BLOGS

A blog is a web log, which is essentially a log of events or actions that can be continually altered and updated on the web. Some programming teams prefer to communicate using blogs, whereby milestones and deadlines can be tracked by having members of the team update the web log when necessary.

EMAIL

Email is still one of the most popular ways for programming teams to keep in touch. Often, programmers will create email groups, which contain the addresses of all members of the programming team for the specific project. When an email needs to be sent, the group name is entered, that way all members of the team are updated about the project.

NETWORKED DOCUMENTS

Many software teams use a network to share documents so that all members of the team can add, access or edit documents. Sometimes these networks involve internal storage of files, that are only accessible when logged into a work computer. Other times, online document sharing sites are used, so that documents can be accesses at home or at work. Examples: Google Docs, Dropbox, etc…

BE CAREFUL

Communication using the shared calendars, blogs and email can be extremely convenient, but also dangerous. Any time you communicate with anyone, and you cannot see them, you are at risk of being misunderstood. The reason is that they can't see your facial expression (if you are smiling or frowning or looking mad) and you can't see theirs (if they are shocked or insulted).

You may even know of a situation in your life where something you wrote in an email or a text was misunderstood by the person to whom it was sent, simply because of the lack of visual cues.

It is for this reason that many companies have policies regarding the ways in which electronic communication needs to take place. These policies ensure that no one on the programming team is misunderstood.