



Introduction to CC Gantt Charts

CC Gantt is sold as a developer's template to help FileMaker developers integrate sophisticated Gantt Charting into their projects. Most developers will likely want to learn about CC Gantt by diving in and examining the system directly. This overview has been prepared for those who might want more of a guided tour of how to *use* CC Gantt Charts, as opposed to how to integrate or modify it.

CC Gantt Chart is a tool to let you visualize project milestones in the Gantt format. It is not a project management system itself but rather is designed to be hooked up to an existing project management system. Alternately, you can use the Pro Version of CC Gantt Chart as the beginning of a new project management system. The Pro Version comes with simple (very simple) databases of Projects and People, which are meant to be replaced with corresponding databases in systems you may already have. Of course if you don't already have a project management system, you could begin building out these databases to let CC Gantt function as the beginnings of your new system.

In the following sections we'll discuss how to use the Free Version of CC Gantt before we get into how to use all the visualization features in the Pro Version. The charts produced by the Pro Version of CC Gantt are, we believe, some of the most practical and elegant project tracking charts out there. We hope you find them useful.

Projects and Milestones

CC Gantt Charts allows you manage "milestones" according to the dates they are due and according to their status. Milestones can be different things to different people, but in a Project Management context, milestones are the line items of a Project. In other words, any given Project may have any number of Milestones. Think of milestones as tasks within a project. So, in a software development project, we may have milestones representing the completion of research, the building of a specification, presenting the specification to the client, etc.

In CC Gantt, milestones may be thought of as having one discrete due date, or they may have both a start and an end date. For instance, "Meeting to discuss software revisions" may have just one date: the meeting is on the 21st of May. That meeting would be depicted as a milestone with no start date, simply an end date of May 21st. At the same time you could have milestones like "Develop Specification for Reports", this event might take several weeks and you could this have a milestone with a start date of 5/10 and an end date of 5/24. The first of these milestones, the one with just an end date and no start date, is depicted on the Gantt Chart as a diamond; just a single "point" on the chart. The second kind of milestone, the one with a range from one date to another, is depicted as a bar starting on the start date and continuing through the end date.

The Free Version of CC Gantt Chart doesn't really understand "projects" per se. This free version allows you to chart any number of milestones but doesn't have any field like "project title" that would let you easily tell the

milestones of one project from the milestones of another project. Unless you begin the name of each milestone with something that designates its project, the Free Version of CC Gantt really just lets you chart one project at a time.

The Pro Version of CC Gantt does contain a field for Project and lets you associate each milestone with a project. In this way you can print a chart showing just the items from one project, or print multiple projects on the same chart. The Pro Version also allows you to specify a Project Phase for each milestone so that you can print just the milestones from one phase of a project if you wish.

Using the Chart

Before you begin entering your own milestones in the chart you should probably play with the sample data a bit, changing dates and milestone statuses to see how it affects the chart. Here are a couple things to keep in mind as you play with the sample data:

a) There is no validation in CC Gantt- we imagine that users will add their own business logic and security to the system. Thus there is nothing to prevent you from entering End Dates that are earlier than the milestone's Start Date. Entering dates this way will make the chart look bizarre.

b) You can also make a very weird looking chart by accidentally entering a date in the 200s instead of the 2000s. A date like "5/21/204" will also make the chart look bizarre.

c) Only items for which the "show" checkbox is checked will display on the printed chart. This lets you record private items without having to put them on the charts that your clients or the public see,

d) Bars on the chart get their color from the Milestone's status. Thus, changing the status of an item will change how it displays on the chart. You can change the list of possible statuses and the colors associated with each status on the settings screen: simply click on the "About" tab and then click the "Settings" button. To add or change colors, you'll simply copy an image to your clipboard and then paste it into one of the "Bar Color Projected" fields beside a Status Name. An easy way to do this is to create a large colored rectangle in FileMaker's layout mode and copy that before pasting it in as a status color. Be sure that the image you copy and paste is at least 13 x 570 px.

Entering New Milestones: Free Version

Once you've played with the charts for a while you'll want to create your own milestones. Since the Free Version of CC Gantt only really works with one project at a time, you'll probably want to start your milestones by deleting all the sample data in the chart. To do this you won't delete any GanttController.fp5 records, but rather you'll delete records from GanttItems, our milestones file.

Deleting Sample Data. From FileMaker's window command, select GanttItems.fp5. Make sure that all records in the file are in the found set and then select Records / Delete Found Records... from the FileMaker menu. Once these are all deleted, return to the Milestones tab of CC Gantt Controller. You'll see that the sample milestones no longer appear in the portal of milestones on that tab.

Creating a New Item. Click the "Add Milestone" button on the Milestones tab of GanttController. A new

milestone is created. It is given a sort order of "1" and a status of "waiting". You can alter this sort order to change the order in which items appear on the chart; changing the status will change the color of the item's bar on the printed chart. Your cursor is left in the milestone name for the newly created item. Type "Something" into the name, then tab over to the Start Date and enter 5/1/2004. Enter 9/1/2004 for the item's end date.

Printing a Simple Chart

With this one sample item in the chart, click the "Print Chart" button on the Milestones tab of GanttController. You'll see a simple chart with just one bar. There are a few things to note about this chart:

- a) There is a "continue" button visible on the left side of the chart. Click this to leave this preview of the chart; you'll be asked if you wish to print the chart. Clicking "Cancel" will bring you back to the Milestones tab of GanttController.
- b) Notice the dates across the top of the chart. The left most date is 5/1/2004 and the right most date is 9/1/2004. (Note, be sure your page setup is set to landscape so that you can see the right hand edge of the chart.) CC Gantt figures out these dates automatically. Notice that the range of dates across the top matches the "chartable range" of data in your chart. That is, the total range of the chart is the same as the range from the start date of the earliest chartable item to the end date of the latest chartable item. The Free Version of the chart always presents the chartable range this way; the Pro Version lets you set the range of the chart so that you can print just a portion of the chartable range (zooming in) or print some blank space on either side of the chart (zooming out). This zooming can be very useful for projects that span many years but also have short milestones of several days within them. If you always printed the whole chart, those multi-day milestones would be so compressed that they would appear like single date events.

To see how the chart comes up with the chartable range, let's add another item. Click the "Add Milestone" button on the Milestones tab of GanttController and enter a milestone named "Something Else" with a start date of 7/15/2004 and an end date of 3/1/2005. Now click "Print Chart" again and see how our first bar is depicted as considerably shorter, even though the event it depicts lasts for just as many days. The bar is shorter because it now takes up a smaller percentage of the chartable range.

Tips for Customizing the Free Version of CC Gantt

The key to getting the most out of the Free Version is to realize that the charting scripts are just printing a found set. You can really make the Free Version a lot more useful if you build the found sets yourself before printing the chart. This can be one way around the fact that the free version really only handles one project at a time; if you can build a found set for one project, and then another, you can get the free version to accommodate multiple projects. The found set you'll want to build is a set of milestones; that is, a set of records in GanttItems. Once you have your found set, the "Print Gantt Main" script in Gantt Items will build the chart.

When it comes to modifying the look of the printed chart, we'd suggest that "adding" things to the chart is much easier than taking things away. The charts are drawn using a very complex set of stacked fields and you should only attempt to take these apart after you've made sure to backup your files. Should you want to change how the charts look, you'll be manipulating the Gantt Print Mac and Gantt Print Win layouts in GanttItems. Be sure to take a look at the How It Works layout in GanttItems first. This layout unstacks the fields used to draw the charts and explains how each one works. As a rule of thumb, if you don't "get" this layout, you probably want to get

some help before trying to radically modify the chart layouts on your own.

Introduction to the Pro Version: Milestones

The Pro Version of CC Gantt contains 3 tabs on which you can enter new milestones. The first of these, called "Milestones" operates just like the milestones tab on the Free Version discussed above. (If you haven't already, please read that section before continuing.)

In addition to these additional tabs the Pro Version introduces the ability to compare two pairs of dates for each milestone. In this way you can record the "Projected" start and due dates for an item, and then compare these with the actual start and done dates once the project gets underway. On the printed chart, the projected dates are shown as one bar and the actual dates are shown as a second bar directly below the first. This makes it very easy to see how the actual events of the project are comparing to the planned events.

You'll also notice a new field on the Milestones tab of the Pro Version when compared to the Free Version: there is now a field to record the Project Associated with each milestone. Projects are recorded in their own database (SampleProjects.fp5). You can select this database from FileMaker's Window command and add new projects using FileMaker's built in New Record command. If you already have a database of projects, simply edit the value list "Projects" in GanttController so that it pulls a Project ID and Project name from your file instead of from SampleProjects. Note that milestones do not have to have a project associated with them.

Introduction to the Pro Version: Filters

The Filters tab of the Pro Version takes some of the work out of building found sets of milestones to print. Remember that when discussing the Free Version we said the trick was to realize that the chart prints a found set of milestones? Well in the Pro Version, this Filters tab uses FileMaker relationships to help you filter down a found set of milestones to print. There are several filter criteria atop the portal of milestones. If you click the "clear" button beside each criteria field no milestones will show up- because nothing matches the (empty) criteria you're searching for.

(Note: be sure that the "Show All / Use Filters" radio button on this screen is set to "use filters".)

Using the sample data that comes with the Pro Version, and having cleared all the filter criteria as described above, click in the project field and select "ABC Labs: Quality Control" (one of the sample projects). You'll now see milestones for it in the portal. Next, click on the person responsible filter and select "Jenkins, Sammy". You'll see the list reduced to just those "ABC Labs: Quality Control items for "Jenkins, Sammy". If you now click Print Chart, you'll see that of these items, only the ones marked "show" appear on the chart. Click "continue" to return to the Filters tab.

Notice that for each item showing on the Filters tab there is a field for "Phase" beneath the project field for each item. If you click into this field you'll see a popup list of the phases for that project. This phase attribute is used when printing the chart to summarize items by project phase. Again, items do not need to have phases, but using them can help you organize large numbers of lines items onto a single (multi-page) chart. There is no database of phases as there is for projects. The popup list of phases is built from the contents of the "phase" field for a given project. Thus, when you create new projects, the popup list of phases will be blank until you enter your first phase in there for that project.

There is one more item to note about the Filters tab. You cannot create new records on this screen unless the "Show All / Use Filters" radio button on this screen is set to "show all". This is an intentional simplification in the chart to keep things as (relatively) simple as possible.

Introduction to the Pro Version: Planning

This is where the Pro Version really shines. The Planning Tab is the most elegant date manipulation interface we know of... and the beauty of it is that it is just a simple FileMaker list view. That means it lets you perform finds, sorts, and create new records right on the chart. It also respects found sets so that you can easily print a chart of any collection of milestones you've happened to find.

There is a lot happening on the Planning screen and we'd encourage you to experiment on this screen a good deal using the sample data.

Edit Milestones. To the left of each milestone is a small blue triangle. Clicking on that will bring up a miniwindow in which you can edit the milestone. All the milestone attributes from the Milestones and filters tab are here, but the fields are presented on their own, with a lot more space for editing and typing. Note that you can change milestone start and end dates either by typing them into the date fields, or by using the arrows on either side of the fields to move the dates left or right. You can also change the milestone's status here. Note that if you change the status the chart in the background changes colors automatically; this lets you preview your changes as you're making them. (Some date changes will only take effect after the "Done" button is pressed.

Zoom. Clicking the "Zoom" button on the Planning Tab brings up an interface for manipulating the chartable range independently of the values being charted. One of the things this means is that you can manually edit the left and right dates on the chart. The best way to get the hang of this screen is to just play around with the different zoom options, using "Zoom 100%" to return to the default chartable range whenever you need to. In our work we use the zoom functions most often to print a one or two month slice of a much longer project.

Manipulating Chart Dates by Clicking on Bars. One of the most useful features of CC Gantt is the ability to assign milestone dates by just clicking in bars- without typing dates at all. Consider this; you have a small software project and you know that you can only begin it in May but have to complete the work in August. Lets sketch this out as a way of learning how to use the Planning Tab.

Creating New Milestones: on the Planning Tab of the Pro Version

First, on the Planning tab, select Records / Show all Records, and the Records / Show Omitted. This gives you a blank chart (remember we had to delete all our milestones to get to the same place in the Free Version). Now let's pretend we have 5 milestones, Research, Design, Design Approval, Building, and Installation. Click "Add Milestone" and type the name of the first milestone (Research) into the milestone name. Don't worry about any of the other fields and click "Add Milestone" again, entering the name of the second milestone and so on until you have 5 milestones. So far so good. Now, click Zoom and force the chart to consider the time range you have to work in. enter 5/1/2004 in the Left Edge date and 9/1/2004 in the Right Edge date. (We want to see all of August, so we enter the first date of September as our right edge.) Click Done.

Here is where CC Gantt can really make things go quickly. Hold down the option (alt) key for the following exercise. Let's say you instinctively know that research and design take about 1/2 of the project time, while coding and installation take the other half. That means your design approval has to happen somewhere right in the middle of the project. In the row for Design Approval click into the grey area of the chart somewhere near the middle of the chartable range (around July 2nd). Notice that CC Gantt draws a diamond right where you clicked. Now you may need to adjust these dates down the road, but we're about to rough in this projects' schedule very quickly. Now having found the midpoint of our project, we know research and design need to happen before that, so in the line for Research hold down the option (alt) key again and click somewhere near the beginning of the chart. One the diamond draws, click again somewhere further down the chart, but before our Design Approval is due. Do the same for Design, roughing it in between the end of Research and the beginning of Design Approval.

Now try a couple without the option key held down. You'll see that you're presented with a dialog asking you to confirm the type of date being set (start date, end date, etc,) as well as the date itself. Other tabs on this miniwindow allow you to edit the milestone, making this a convenient time to flesh in details about who might be responsible for the milestone etc. When clicking directly into the bars, CC Gantt assigns dates in the following order:

Projected Start Date
Projected End Date
Actual Start Date
Actual Done Date

So, if you click in a bar already containing a Projected Start Date and a Projected End Date, CC Gantt will assign an Actual Start date where you clicked; if you do this without the option key held down, you can easy change the date assigned to be a revision of the Projected End Date and thus easily manipulate bar lengths in this way.

Remember that the Planning tab is just like a printed chart in browse mode, so you can manually find, duplicate and delete milestones as you see fit, making this the most convenient spot from which to work on project milestones. There are just a few things to keep in mind when you then move on to printing a chart from the Planning tab.

a) The sort order for printed charts is hard coded into the print scripts; this is required so that CC Gantt can sub-summarize the chart by project phase. So, no matter how you have the chart sorted in Browse mode, it will always print sorted by project phase and then by sort number. You can use the Sort button on the Planning tab to put your milestones into the printing sort order at any time.

b) The print script also respects the "show" attribute. So if you have milestones in your found set that are Not marked show, they will be omitted from the found set when the chart is printed. When you're returned to browse mode after previewing or printing the chart, the found set you see is the same as the set used to print the chart, and will only contain items marked show.

Finally, many users play around with the Zoom options in order to get the right "feel" for a chart. They may want the chart more or less compressed than it appears at its 100% Zoom option. You'll be glad to know that all the Zoom commands are available in the ScriptMaker window so that you can employ them in Preview Mode to really fine tune the alignment of your chart.

Other Resources

For additional information about CC Gantt, please read the FAQ which ships with the product: see the FAQ button on the About tab of CC Gantt Charts. You may also read an updated version of the FAQ online at <http://www.clevelandconsulting.com/faq>

Please also visit our support forums where you may ask questions of other CC Gantt users and catch up on the latest announcements regarding CC Gantt Charts: <http://www.clevelandconsulting.com/support>

We hope you enjoy working with CC Gantt Charts.