

Using Observatory Gantt Charts

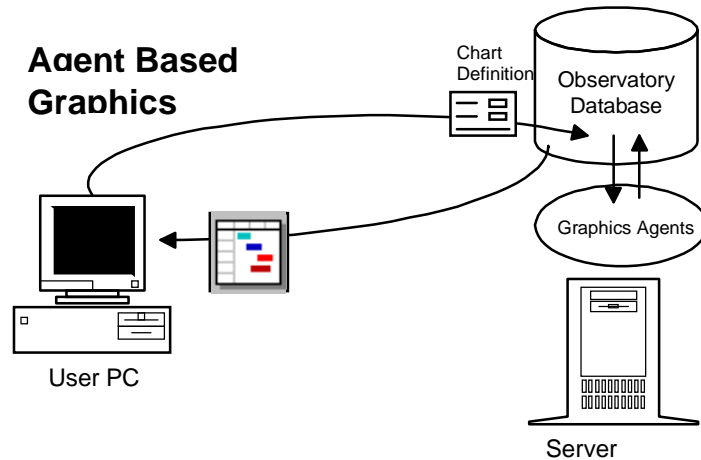
Overview

The system can generate attractive Gantt charts for programs and organizations. These charts show the timing and progress of projects and commitments as bars drawn against a time line.

These charts are produced in Adobe Acrobat format, so you need to have an Acrobat Reader on your computer to display them. Acrobat Readers are available, free, for all platforms from www.adobe.com.

The Acrobat (.PDF) format is used for several reasons. First, it is very compact. A chart that would take several million bytes as a bitmap may be only 50,000 bytes in Acrobat format. This makes a big difference when accessing a server remotely, or using a web browser. Second, Acrobat documents can be printed with very high fidelity. This makes them quite suitable as presentation materials and as elements of written reports.

This implementation uses a technique we call Agent Based Graphics in which the server prepares charts automatically from user provided instructions.



The underlying concept of agent-based graphics is simple. The user fills out a form called a *Chart Definition* that is stored in the observatory. The graphics agents, running on the server, create chart files according

to the user's instructions. These chart files are periodically updated, usually nightly, using the current observatory data.

Creating a Chart

Using a Notes Client

Click on the "create a new presentation" item on the observations navigator. Select a Gantt Chart.

1. Enter a title and optional subtitle for the chart
2. Select the chart type - Program or Commitments
3. Select the chart subject using the button.

The list will display all programs or all organizations depending upon which chart type you have selected in step 2.

4. Set other options as desired.
5. Close and save the chart definition.

Using a Web Browser

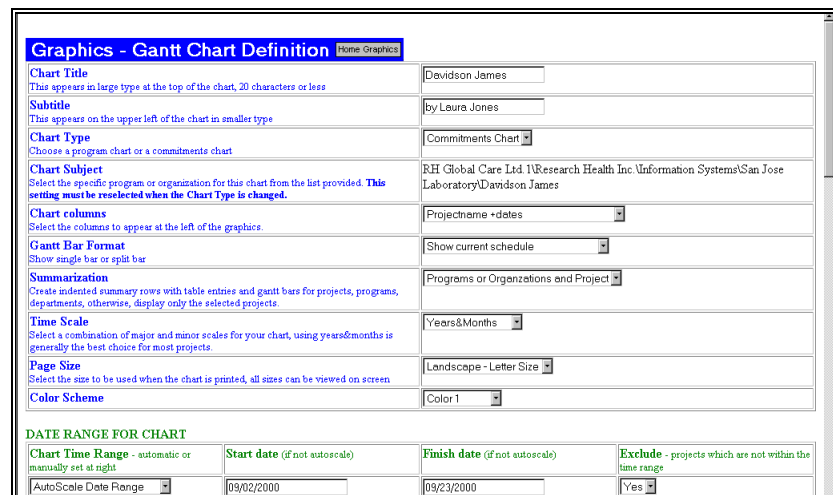
Click on the "create a new presentation" item on the observations navigator. Select Gantt Chart for Program, Organization or Member.

If you select "Member" and A-Z selector will appear. Click the first letter of the member name.

Another page will appear to select the specific Program, Organization, or Member. Select and Press Submit.

The Gantt Chart definition form will appear.

Note. When you create using a browser, you cannot change the chart subject.



Graphics - Gantt Chart Definition Home Graphics			
Chart Title <small>This appears in large type at the top of the chart, 20 characters or less</small>	<input type="text" value="Davidson James"/>		
Subtitle <small>This appears on the upper left of the chart in smaller type</small>	<input type="text" value="by Laura Jones"/>		
Chart Type <small>Choose a program chart or a commitments chart</small>	<input type="text" value="Commitments Chart"/>		
Chart Subject <small>Select the specific program or organization for this chart from the list provided. This setting must be reselected when the Chart Type is changed.</small>	<input type="text" value="RH Global Care Ltd. Research Health Inc. Information Systems San Jose Laboratory Davidson James"/>		
Chart columns <small>Select the columns to appear at the left of the graphics.</small>	<input type="text" value="Projectname + dates"/>		
Gantt Bar Format <small>Show single bar or split bar</small>	<input type="text" value="Show current schedule"/>		
Summarization <small>Create indented summary rows with table entries and gantt bars for projects, programs, departments, otherwise, display only the selected projects.</small>	<input type="text" value="Programs or Organizations and Project"/>		
Time Scale <small>Select a combination of major and minor scales for your chart, using years&months is generally the best choice for most projects.</small>	<input type="text" value="Years&Months"/>		
Page Size <small>Select the size to be used when the chart is printed, all sizes can be viewed on screen.</small>	<input type="text" value="Landscape - Letter Size"/>		
Color Scheme	<input type="text" value="Color 1"/>		
DATE RANGE FOR CHART			
Chart Time Range - automatic or manually set at right	Start date (if not autoscale)	Finish date (if not autoscale)	Exclude - projects which are not within the time range
<input type="text" value="AutoScale Date Range"/>	<input type="text" value="09/02/2000"/>	<input type="text" value="09/23/2000"/>	<input type="text" value="Yes"/>

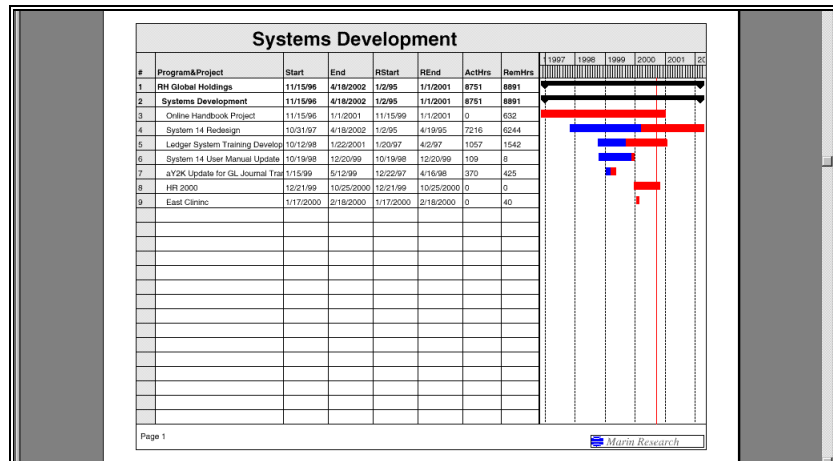
The graphics agents will usually be scheduled to run at night, so this chart will not be available for viewing until tomorrow.

When it is available, it will appear in the "Ready for Viewing" view on the Observations Navigator. The title you have specified (in this example "Systems Development" will be listed.

Displaying a Chart

From a Notes Client, select the "Ready For Viewing" item on the Observations Navigator and click on the title to display the chart. This will launch the Acrobat reader to display the chart. Use File Exit to close the reader.

From a Browser, select Observations Navigator. Then select the Ready for Viewing item to display a view of charts. Click on the chart title to display a chart access form.



Click on the file icon at the place indicated and the chart will be downloaded to your desktop. This should also launch the Acrobat Reader (or the plugin version if you have it) to display the chart. If using the Reader, press File Exit when you are done with the chart, if using the plugin, just press the back button.

Once you have found a chart that is useful to you, use the Add to Locator button to put this on your locator. Although the server will update the chart itself, the locator will connect to the chart definition document to which the chart is attached, so this will always find the latest version of the chart.

Chart Definition Options

In addition to data selection, each chart definition specifies the layout of the chart in detail.

You must specify a Title, Chart Type, and Chart Subject. All other specifications are preset with default values.

Title

Enter a short title that will be shown in a large font in the heading area of the chart. This should be 25 characters or less.

Subtitle

Enter a subtitle that will be shown in a small font at the left side of the heading area. This should be 30 characters or less to fit in the space provided.

Chart Type

Select one of the predefined types from the list provided.

Chart Subject

Backspace to remove the existing entry of this field and then press enter to display the list of choices. This list will be constructed based upon the Chart Type selected. Because of the way Notes works, the list is only updated if the existing entry is erased first. Whenever you change the Chart Type, you must also delete the selection in the Chart Data field and reselect.

The choices presented in this list are based upon the current information in the observatory. Note: The default programs and organizations are always listed as "Default Program" or "Default Organization" although the actual names used in the observatory reports may be different.

If you have not setup programs in the database, then this list will only contain the entry "[All]", otherwise each program that has been created will be shown. When programs are multi-level, each individual subset will be listed. For example, if the program Development\Technology\Hardware is used in the observatory, then the Chart Subject List will show

- Development
- Development\Technology
- Development\Technology\Hardware

You should choose the level that encompasses the projects that you want to show.

Chart Type = Commitments Chart

Chart Subject List = List of organizations in the observatory.

If no organizations have been defined, the only entry that will appear will be "[All]". Otherwise each organization that has been created will be shown. When multi-level organization codes have been used, each level will be provided as a selection. For example if the organization code US\Western Region\Oakland was used, the Chart Data Dialog list will show

- US
- US\Western Region
- US\Western Region\Oakland

Chart Columns

This is a selection of which data columns are to be shown on the chart. There are many predefined choices including:

- Projectname
- Projectname +dates
- Projectname +reference dates
- Projectname +dates +reference dates
- Projectname +dates +percentcomplete
- Projectname +dates +work
- Projectname +dates +work +% complete
- Projectname +dates +refdates +work
- Projectname +dates +who (participant name)
- Projectname +dates +work+ % +who
- Projectname +dates +ref + work+%+who

The last selection is Custom which is for advanced users only, please see the section later in this chapter entitled Setting Custom Columns.

Gantt Bar Format

This is a selection between getting one bar for each project showing the start and finish dates or two stacked bars, one showing the reference dates and the other showing the start and finish dates. You probably do not want to show reference dates unless your project managers are tracking against baselines.

Summarization

The choice is whether to show summary rows and schedule bars or not.

Time Scale

This defines the configuration of the timescale on the chart. The timescale has a major and minor scale which are set here. If the chart spans more than 12 months, it will look better if Years + Quarters are used to minimize crowding in the minor scale.

The date format used in the major and minor fields is dependent upon the periods used and system settings. For Day periods, the day number is used. For Weeks, the short date format set on the server which runs the agents is used. For Months, the format is mmm yy (Jan 96) which will be a function of the international settings of the Notes server. For Quarters, the letter Q is followed by the quarter number (1234) and the two digit year. For Years, the 4 digit value is used.

Page Size

Each chart is divided into print pages based upon the desired print page size. All the standard English and Metric sizes are listed. Any page size can be viewed on the screen. When printing, if the page size is different from the available paper size supported by the printer, you must check the "shrink to fit" option in Acrobat to get the entire chart.

The standard Letter size sheet is configured to hold about 24 rows. If you set "C" size, this expands to about 100 lines. Thus, you may be able to fit your whole chart on a single page by changing the paper size and then using the "shrink to fit" option when printing.

Color Scheme

We have provided three preset sets of color selections. Color 1, Color 2, and Black&White (gray scale). It is also possible to customize the color settings.

Date Range for Chart

The date range of the chart can be determined automatically based upon the data selected, or may be set to show specific start and finish dates.

Chart Time Range

Select either Autoscale or User Entered Date Range.

Start Date, Finish Date

Enter the dates for the earliest and latest edges of the time scale. These entries will be used if User Entered Date Range is selected. They will be replaced during chart generation if Autoscale is selected.

Exclude

If Yes, then projects which fall outside the date range will not appear on the chart, if No then these projects will be listed, but no Gantt bar will appear.

If Autoscale is used, this option setting will not have any effect because all projects will be included in the date range.

Example.

If you wanted to define a Commitments chart showing your work for the fourth quarter you would set

Chart Type to *Commitments*

Chart Subject to *you*

Chart Time Range to *User Entered*

Start Date to *9/1/96*

Finish Date to *12/31/96*

Exclude to *Yes*

Additional Options

These options are somewhat more advanced in that you need an understanding of the data being shown to use them effectively

Selection of Detail

1. Show All - all projects will be shown and all summary groups to which they belong will be shown.

2. Show Top Level Summary Only - only program or organization level summary bars are shown, no details below this level are displayed.

Note: Summary bars will not be displayed unless they are selected in the summarization option.

Depth of Detail

If you think of the chart as a large outline, the top level is 1. This option allows you to limit the depth of the chart shown to any arbitrary level. For example, if you wanted a Program chart that shows only phases, you would set the Depth of Detail to 2.

Date Format

The choices are to show just the date, or both date and time. The layout of these values is determined by the international settings of the Notes Server on which the graphics agents are run.

Show Projects that are Planned, InProgress, Completed

These three Yes/No fields can be used to filter projects by their status. For example, late in a project you might eliminate Completed projects from a chart to help the viewer focus on those projects that still need to be done.

Name of chart request

This is a text item that can be used to differentiate between multiple charts with similar titles.

Description attached to chart

This is a text item that will be displayed in the summary information of the Acrobat viewer. Acrobat command File, Summary Information, General.

Status

This can be active or inactive. An inactive chart definition will be ignored by the graphics agents. No new charts will be produced. An active chart will be updated whenever possible.

Created

This is the date the current chart was created.

Advanced Definition

This normally collapsed section consists of three subparts - Advanced definition setting, Style settings, and Logo settings.

As a user, you may never need to look at or change any of these settings because the values have been set automatically based upon the options in the upper part of the form.

However, if you want to use Chart Type=Custom, Columns=Custom, or Page Size=Custom, or Color Scheme=Custom, you will need to understand and adjust some of the parameters in these sections.

Note also that the easiest way to get the chart you want is to first use the automated settings, save the definition, examine the resulting chart, and then change the appropriate features to Custom, and adjust the advanced definition settings as needed to make the changes you want.

Using Custom Chart Types

View/Folder

The Graphics Agents use Notes Views to find the projects or project commitments which appear in the charts. Several views are prebuilt specifically for the purpose of generating graphics. If necessary, you can create your own view or folder.

Type of View Outline

If the view is organized in an outline structure, the agents can read only those documents that belong to the targeted projects or project commitments, if the view does not have such a natural organization, the agents read every document in the view to find those of interest. This may take longer in a large observatory. In this parameter, you tell the agents how the view selected is organized. If you select "no outline", all documents in the view will be processed.

Organization

This option specifies the organization name that project commitments must be assigned to in order to be selected. If blank, the code is ignored in the selection.

Program

This options specifies the program name that projects must have to be included.

Using Custom Columns

Columns

This is just the number of columns to be included

Column Widths

This is a semicolon separated list (24; 144; 44; 44) of the widths of each column from left to right. The widths are specified in units of 1/72 inch. So a width of 2 inches is 144.

Column Titles

This is a semicolon separated list (#;Project;Start;End) for the text that will appear in the heading of the column from left to right. The text specified here has no effect on the data shown in the column.

Column Definitions

This is a semicolon separated list (0; 1; 2; 3) of the information that will appear in each column. Each number corresponds to a particular data field from the list below.

0=line#
1=projectname
2=calculated start date
3=calculated finish date
4=reference start date
5=reference finish date
6=% Complete (0-100)
7=indent level
8=detail(0) or summary(1) or key event(-1)
9=actualwork
10=workremaining
11=projectname
12=resourcenames

Example

To show Projectname and percent complete and actual workhours

```
#Columns [3]
Column Widths [150;44;44]
Column Titles [Project;%;ActHrs]
Column Definitions [1;6;9]
```

Using Custom Page Sizes

Page size parameters are normally set automatically. However, if you set Paper Size to Custom, you can adjust all these parameters. They are all expressed in units of 1/72 of an inch.

Page Width - 792 for letter size (max. 32,000)
Page Height - 612 for letter size (max. 32,000)
Row Height - 18 for 24 lines/page (16 to 24 is recommended)
Top Margin Height - 36 default
Bottom Margin Height - 16 default
Time Scale Row Heights - 16 default
Left Margin - 40
Right Margin - 40
Top Margin - 40
Bottom Margin - 40
Gantt Bar Height as percent of Row Height - 50% is default

Using Custom Color Schemes and Fonts

User Defined Font Styles

Project Gateway provides four standard text fonts which are identified as 1, 2, 3, 4.

1 is Helvetica 10 point
2 is Helvetica Bold 10 point
3 is Helvetica Bold 24 point

4 is Helvetica Italic 10 point
5-16 are reserved

You can create up to 16 additional fonts which will be identified as 17,18.... Think of these fonts as resources that can be applied to particular portions of the chart. If you don't need any new fonts or sizes, leave these items blank.

Font Size (pt.)

This is a user defined list of one or more font sizes. If it is empty, then it means that there are no user defined fonts. If there is more than one entry in this list, then they are separated by semicolons. The exact same number of entries must be provided in the next list.

PDF Font#s

This is a list of number for each of the user defined fonts. These numbers identify which of the built in Acrobat font are used for that user defined font. Acrobat has 14 built in fonts which all Acrobat viewers can properly image. You can make any of these fonts in any size as a custom font for use in your chart.

- 1 Helvetica
- 2 Helvetica-Bold
- 3 Helvetica-Oblique
- 4 Helvetica-BoldOblique
- 5 Times-Roman
- 6 Times-Bold
- 7 Times-Italic
- 8 Times-BoldItalic
- 9 Courier
- 10 Courier-Bold
- 11 Courier-Oblique
- 12 Courier-BoldOblique
- 13 Symbol
- 14 ZapfDingbats

User Defined Color Styles

The system predefines a series of 6 colors which it associates with numbers 1-6.

- 1 Grayscale BLACK (-1,0,0)
- 2 Grayscale White (-1,1,0)
- 3 Red (1,0,0)
- 4 Green (0,1,0)
- 5 Blue (0,0,1)
- 6 20% Gray (-1,.8,0)
- 7-16 are reserved

User Defined Colors

You can create additional colors by supplying the Red, Green, and Blue intensity values for each color. Each value is a number between 0 and 1.

An intense color is a high number. These numbers are entered in three lists.

Red Array **0.2;1**

Green Array **0;1**

Blue Array **0;0**

This defines two new colors, the first is light red (.2,0,0) and the second is bright Yellow (1,1,0). Colors that you define are numbered 17,18,19... for use in the Color/font selection Array.

Gray Scale Colors

If you want to a shade of Gray, then set the Red value as -1 and use the Green value to specify the brightness. For black, the Green array entry is 0. It should be 0.2 for dark gray, 0.8 for light gray, 0.1 for white.

Color/font Selection Array

This is a 24 entry, semicolon separated list that defines the look and feel of the chart. You should change this carefully to make sure that you are changing the table entry that you really want to change. Color numbers used herein must be either one of the predefined color numbers (1-6) or a user defined color specified above. Font number must be one of the predefined fonts (1-4) or must be defined as described above.

- 1 Color used for detail project bar edges for actual work
- 2 Color used for detail project bar fill for actual work
- 3 Color used for detail project bar edge for to go work
- 4 Color used for detail project bar fill for to go work
- 5 Color used for detail project bar edge for baseline (reference bar)
- 6 Color used for detail project bar fill of baseline bar
- 7 Color used for summary project bar edge
- 8 Color used for summary project bar fill
- 9 Color used for summary project bar edge for baseline (reference bar)
- 10 Color used for summary project bar fill for baseline
- 11 Font used for column data for summary projects
- 12 Font used for column data for detail projects (note also item 25)
- 13 Font used for Chart Subtitle
- 14 Font used for Chart Title
- 15 Font used for Page Number in lower right side of bottom margin
- 16 reserved
- 17 Font used for column headers
- 18 Font used for major timescale
- 19 Font used for minor timescale
- 20 Color used for the As of Date Line
- 21 reserved
- 22 reserved
- 23 reserved
- 24 reserved
- 25 Font used for column data for detail key events (note also item 12)

The Color Scheme selection presets all these values. If you set ColorScheme to Custom, then you can edit the values to create any combination you want.

If you wanted summary bars to be yellow, for example, you would define a custom color 18 as described in the preceding section and then enter 18 into entries 7 and 8.

Using a Custom Logo

In the upper right part of the top margin is an area reserved for user defined logos. Installing a logo requires some knowledge of postscript graphics format. Customers needing to use this capability should contact Marin Research.

Gantt Bar Dates and Colors

Percent Complete

The percent complete shown for an project will be the same value found in the corresponding project document.

The project bar for detail projects is colored proportionally to the percent complete value. The summary project bars are not colored.

If the project is started, the percent complete is forced to a minimum of 1 percent. If the project is not finished, the percent complete is limited to a maximum value of 99%.

Summary Bars

Summary Bars always span the start and end dates of the items they summarize. They are drawn with descending arrowheads at each end.

When reference bars are displayed, the project bars are split in half, but the summary bars overlap each other. So it is important the color of the Reference summary be different from the color of the Project summary. In the preset schemes, the project summary bars are black and the Reference summary bars are white with black edges.

Gantt Bars

Project Bars display the start and end dates of the project when the end date is known, or span the actual start and current date when the end date is not known.

Start Date

1. The start of a project bar will be the actual start date if the project is started or the planned start date if it is not started.

Finish Date

1. The end of the project bar will be the actual finish date if it is finished.
2. If it is not started, the end will be the planned finish date.

3. If it is started but not finished, then the following rule is used. If the planned finish date is later than the As Of Date (the date the chart is made) then the project end will be the planned finish date. If the planned finish date is earlier than the As Of Date, then the project finish will be the as of date.

Coloration

1. If the project is complete, the bar will be drawn in using the "actual" colors. If the project is not started, the bar will be drawn using the "planned" colors.
2. If the project is actually started, then the percent complete of the project is used to split the bar into two areas with the actual color on the left and the planned color on the right.

Font

1. If the row represents a program or organization, bold font is used.
2. If the row represents an approved project or commitment, normal font is used.
3. If the row represents as proposed project or commitment, italic font is used

Reference Bars

Reference Start Date

The start of the reference bar will be the reference start date stored in the project or commitment report. This will have been derived from the baseline value in the project plan.

Reference Finish Date

The end of the reference bar will be the reference finish date stored in the project or commitment report. This will have been derived from the baseline value in the project plan.

Reference Coloration

The reference bar will be drawn in the color specified for reference data.

Reference Summary Bars

The start and finish dates are the earliest and latest dates of the information being summarized.

