THE USE OF GANTT CHARTS IN THE MANAGEMENT OF HEALTH ORGANIZATIONS

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Abstract
Gantt Charts are useful tools for analyzing and planning complex projects. They:
1. Help in planning out the tasks that need to be completed
2. Give a basis for scheduling when these tasks will be carried out
3. Allow to plan the allocation of resources needed to complete the project, and
4. Help you to work out the critical path for a project where you must complete it by a particular date.

When a project is under way, Gantt Charts help to monitor whether the project is on schedule.

Keywords: Gantt charts, project planning, project monitoring,

A Gantt chart is a horizontal bar chart developed as a production control tool in 1917 by Henry L. Gantt, an American engineer and social scientist. Frequently used in project management, a Gantt chart provides a graphical illustration of a schedule that helps to plan, coordinate, and track specific tasks in a project.

Gantt charts are useful tools for planning and scheduling projects. They allow you to assess how long a project should take, determine the resources needed, and lay out the order in which tasks need to be carried out. They are useful in managing the dependencies between tasks.

When a project is under way, Gantt charts are useful for monitoring its progress. You can immediately see what should have been achieved at a point in time, and can therefore take remedial action to bring the project back on course. This can be essential for the successful and profitable implementation of the project.

To draw up a Gantt chart, it must follow these steps:

1. List all activities in the plan**.** For each task, show the earliest start date, estimated length of time it will take, and whether it is parallel or sequential. If tasks are sequential, show which stages they depend on.
2. Head up graph paper with the days or weeks through to task completion.
3. Plot the tasks onto the graph paper. Next draw up a rough draft of the Gantt Chart. Plot each task on the graph paper, showing it starting on the earliest possible date. Draw it as a bar, with the length of the bar being the length of the task. Above the task bars, mark the time taken to complete them.
4. Schedule activities. Now take the draft Gantt Chart, and use it to schedule actions. Schedule them in such a way that sequential actions are carried out in the required sequence. Ensure that dependent activities do not start until the activities they depend on have been completed. While scheduling, ensure that you make best use of the resources you have available, and do not over-commit resource.
5. Presenting the analysis. The final stage in this process is to prepare a final version of the Gantt Chart. This should combine the draft analysis (see above) with your scheduling and analysis of resources. This chart will show when you anticipate that jobs should start and finish.

In constructing a Gantt chart, keep the tasks to a manageable number (no more than 15 or 20) so that the chart fits on a single page. More complex projects may require subordinate charts which detail the timing of all the subtasks which make up one of the main tasks. For team projects, it often helps to have an additional column containing numbers or initials which identify who on the team is responsible for that task.

Gantt charts don't indicate task dependencies - you cannot tell how one task falling behind schedule affects other tasks. The PERT chart, another popular project management charting method, is designed to do this.

Benefits

- Gives a clear illustration of project status.
- May be adjusted frequently to reflect the actual status of project tasks.
- Helps manage the temporal dependencies between tasks.

Prerequisites

- Gantt chart forces group members to think clearly about what must be done to accomplish their goal.
- Computer software can simplify constructing and updating a chart.

Examples – Case study

In the following case study is present a Gantt chart (generated with Microsoft Project) for a hospital construction project .

Activity	Description	Predecesors	Duration (weeks)
A	Select administrative and medical staff.	-	12
B	Select site and do site survey.	-	9
C	Select equipment.	A	10
D	Prepare final construction plans and layout.	B	10
E	Bring utilities to the site.	B	24
F	Interview applicants and fill positions in nursing support staff, maintenance, and security.	A	10
G	Purchase and take delivery of equipment.	C	35
H	Construct the hospital.	D	40
I	Develop an information system.	A	15
J	Install the equipment.	E, G, H	4
K	Train nurses and support staff	F, I, J	9

and the associated Gantt Chart.
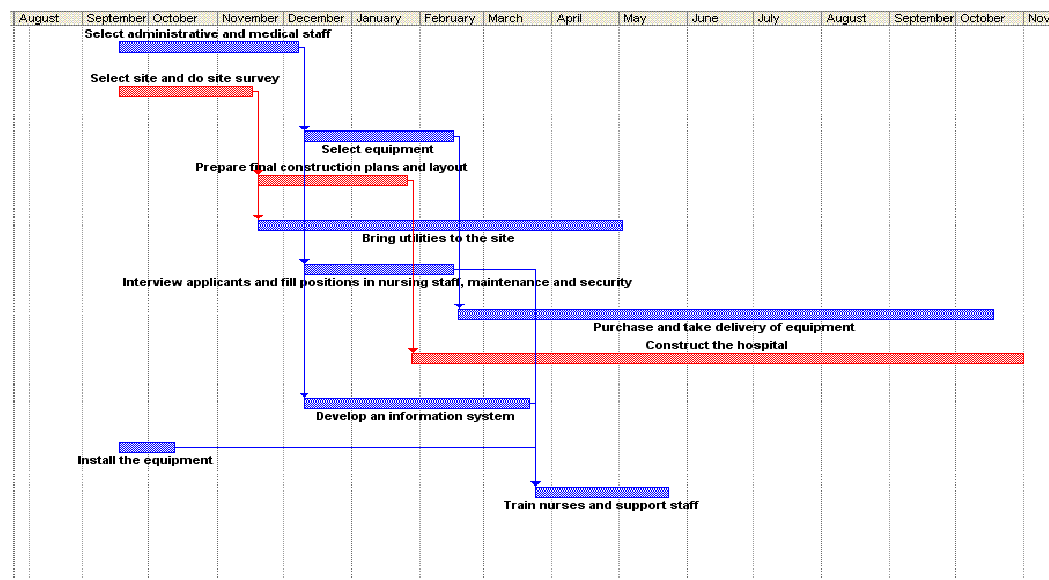
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