

PROJECT MANAGEMENT USING PRIMAVERA P68.2

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ABSTRACT

An analysis of the results of survey and comparison of conventional method and using PRIMAVERA, a management tool was undertaken. PRIMAVERA software has been selected because of its comparable and optimum project plans to stimulate the adjustments. The wide acceptance of this software, especially in industries of developing cities has made the project managers to easily handle the large projects effectively and also resulted in low cost as when compared to conventional methods of management of project. The results indicate that this management tool has many features and benefits to lead to a successful project completion. It has been studied that professional project schedulers use PRIMAVERA to plan and analyse multiple projects to ensure the timely completions and within budget. It must be noted that this study is based on comparison of relatively small projects and that the results on larger, more complex projects might be different.

KEYWORDS: PRIMAVERA, Project Management tool.

INTRODUCTION

Project is **unique** that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. So a project team often includes people who don't usually work together sometimes from different organizations and across multiple geographies. Hence project management plays a crucial role in a project execution.

Project management, a methodical approach to planning and guiding project processes from start to finish. According to the Project Management, the processes are guided through five stages: initiation, planning, executing, controlling, and closing. Project management can be applied to almost any type of project and is widely used to control the complex processes of software development projects.

Project management includes developing a project plan, which includes defining and confirming the project goals and objectives, identifying tasks and how goals will be achieved, quantifying the resources needed, and determining budgets and timelines for completion. It also includes managing the implementation of the project plan, along with operating regular 'controls' to ensure that there is accurate and objective information on performance relative to the plan, and the mechanisms to implement recovery actions where necessary.

PROBLEM STATEMENT

Projects are becoming increasingly complex. Economic uncertainty is putting a new level of pressure on teams and programs to execute well. Businesses are struggling to react quickly to fluctuating markets and changing business demands. Executives are demanding more project visibility. Distributed teams require around the-clock collaboration and coordination, as well as the ability to successfully navigate change throughout the project lifecycle. Today's

project managers need tools that deliver the necessary project insight to maintain project schedule and budget commitments. And they need the ability to integrate project and program resources with other departments and at other locations to ensure project success.

RECTIFYING THE PROBLEM

Today the multinational companies are facing problem of this communication gap between the coordinators and hence which leads to delay and conflicts. Most of the times project work stops due to certain activities overlapping and hence lead to the increase in project time and similarly the cost of the project.

Project managers generally use various tools to overcome this problem. The project tools are PRIMAVERA, MS Project etc. By using these tools we can link various activities and maintain the proper lags between activities. This leads to saving of cost and timely completion of projects in spite of constraints.

STUDYING PRIMAVERA

WORKSPACE-When you first open a project in PRIMAVERA, the Home workspace displays the main functions available in the module. For example, click Activities to focus on activity data and customize layouts. The workspace for each main window consists of a menu bar, navigation bar, directory bar, toolbar, and command bar.

ACTIVITY TABLE: Displays activity information in spreadsheet format. Use this type of layout to quickly update a project. Use the Fill Down function to quickly copy and paste contents of rows in the Activity Table. You can use filters and group data to see only those activities that occur in your current status cycle. You can customize Activity Table columns. You can also sort, filter, and group activities in the Activity Table, as well as change the font of the activity information and the color of the table background. The Activity Table is displayed in the top and bottom layouts

GANTT CHART: Provide a graphical display of activity progress over the course of the project. You can customize Gantt chart bars, colors, labels, and symbols. You can also sort, filter, and group activities in the Gantt chart. The Gantt chart is displayed in the top and bottom layouts.

ACTIVITY USAGE SPREADSHEET: Displays units, costs or earned value data by activity over time. Use this type of layout to review per period and rolled up activity resource/cost data. The Activity Usage Spreadsheet is displayed in the top and bottom layouts.

ACTIVITY NETWORK: Provides a graphical display of activities, including logical relationships. You can specify which information you want to display, and you can change the Activity Network colors and fonts. You can also group and filter activities in the Activity Network. The Activity Network is displayed in the top layout only.

ACTIVITY DETAILS: Display detailed information for an activity you select in either the Activity Table or Activity Network. You can also use Activity Details to enter and edit an activity's information, such as dates, resource assignments, and predecessor and successor relationships. Activity Details is displayed in the bottom layout only

BASE LINE: Primavera P6 Professional allows to assign up to three user baselines and one project baseline per project. The following article explains these capabilities and how they can be helpful in tracking the overall status of a project and near-term interim variance reports. Take a look at the following diagram shows the concept of project and user baseline.

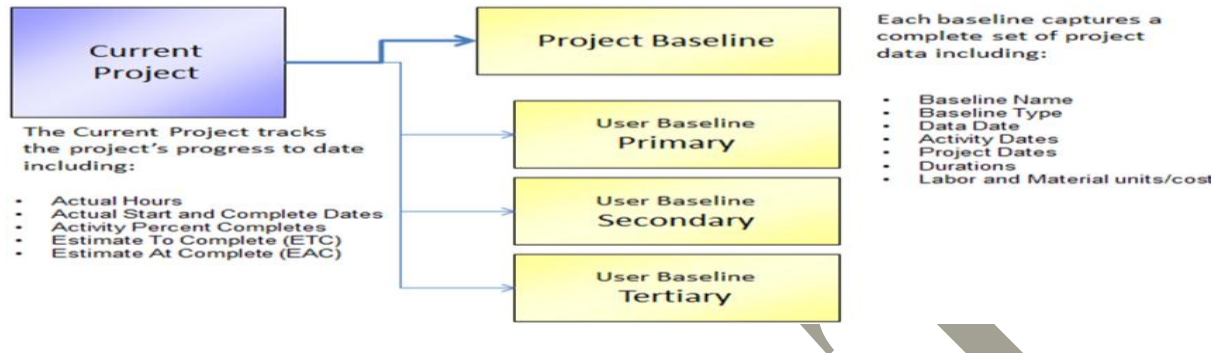


Fig1: Baseline

BASELINE BASIC: When you create a baseline in Primavera P6 Professional using the Maintain Baselines dialog, you are in fact creating a complete copy of the project in the database: the baseline project just doesn't appear in the project list because P6 has it tagged as a baseline copy.

DEFINING CURRENCIES: The exchange rate for the base currency is always 1.0. If you select a different currency than the base currency to view cost data, the base currency value is multiplied times the current exchange rate for the view currency to calculate the values displayed in cost and price fields.

CALENDERS: Create and assign calendars to each resource and each activity. These calendars define the available work-hours in each calendar day. We can also specify national holidays, your organization's holidays, project-specific work/non-workdays, and resource vacation days. Calendar assignments are used for activity scheduling, tracking, and resource leveling.

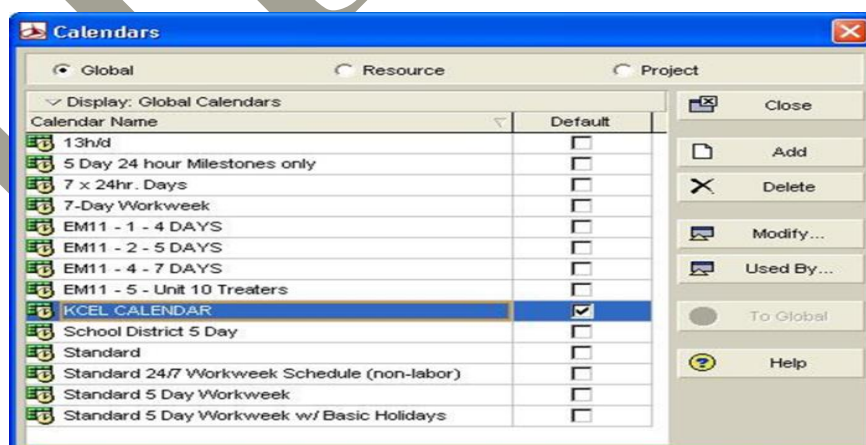


Fig-2: Defining Calender

DEFINING RESOURCES: Resources include the personnel and equipment that perform work on activities across all projects. Resources are generally reused between activities and/or projects.

Resource ID	Resource Name	Resource Type	Unit of Measure	Default Units / Time	Price / Unit
Site	Site Resources	Labor		8/d	Rs.0/h
WL	Welder	Labor		8/d	Rs.40/h
Sk	Skilled	Labor		8/d	Rs.30/h
Formn	Foreman	Labor		8/d	Rs.30/h
Scaff	Scaffolders	Labor		8/d	Rs.28/h
Hlpr	Helper	Labor		8/d	Rs.20/h
Barb	Barbender	Labor		8/d	Rs.25/h
Carpn	Carpenter	Labor		8/d	Rs.25/h
US	Unskilled	Labor		8/d	Rs.19/h
M1	Mason-I	Labor		8/d	Rs.30/h
M2	Mason-II	Labor		8/d	Rs.25/h
BOQ	Sample BOQ	Nonlabor		8/d	Rs.0/h

Fig 3: Defining Resources

CASE STUDY

An existing building that is SGI JUNIOUR BOYS HOSTEL, ATIGRE which is of G+5 stories and has been taken as a compartivie study . This buiding has been scheduled manually and total time taken by the building is about three years .In this study we have tried to revise the schedule and reduce the total duration of the project.

Generation Of Reports:.Gantt chart , Scheduling

The following are the functions of Primavera studied in this case study:

A. PLANNING AND SCHEDULING

Project schedule can be calculated one of two ways: when we choose the Scheduling command or each time we make a change that affects schedule dates. The Critical Path Method (CPM) scheduling technique is used to calculate project schedules. CPM uses activity durations and relationships between activities to calculate the project schedule.

Planning and scheduling software enables the user to:

- Enter the breakdown structure of the project deliverables or products into the software. This is called a Work Breakdown Structure (WBS) or Product Breakdown Structure (PBS),
- Break a project down into the work required to create the deliverables and enter these into the software as Activities under the appropriate WBS,
- Assign durations, constraints, predecessors and successors of the activities and then calculate the start and finish date of all the activities.
- Assign resources and/or costs, which represent people, equipment or materials, to the activities and calculate the project resource requirements and/or cash flow,
- Optimize the project plan,
- Set Baseline Dates and Budgets to compare progress against,
- Use the plan to approve the commencement of work,
- Record the actual progress of activities and compare the progress against the Baseline and amend the plan when required, allowing for scope changes, etc.,
- Record the consumption of resources and/or costs and re-estimate the resources and/or costs required to finish the project, and
- Produce management reports.

The manual schedule was collected from the respected authority of SGI Junior Boys Hostel, Atigre. the data was futher rectified. A revised time sheet was built with the help of Primavera. The initial date required to complete the project was 13th June, 2015. The revised

schedule by Primavera is ended till 29th January, 2015. Thus compressing the project and a efficient schedule is managed using Primavera

Junior Boys Hostel		Classic Schedule Layout_1				08-Apr-15 16:34				
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	1, 2013		Qtr 2, 2013		
						Feb	Mar	Apr	May	Jun
Junior Boys Hostel		601	01-Oct-12	29-Jan-15	0					
Feasibility and Site Survey		19	01-Oct-12	22-Oct-12	13					
Site Clearance		2	01-Oct-12	02-Oct-12	0					
A1000	Cutting down of shrubs and trees	2	01-Oct-12	02-Oct-12	0					
A1010	Removing of obstructions	2	01-Oct-12	02-Oct-12	0					
Site Development		12	03-Oct-12	18-Oct-12	0					
A1015	Leveling of ground	2	03-Oct-12	04-Oct-12	10					
A1020	Fencing	8	03-Oct-12	11-Oct-12	0					
A1021	Temporary road access	4	12-Oct-12	16-Oct-12	0					
A1022	Taking main water supply line	7	03-Oct-12	10-Oct-12	1					
A1023	Taking electric supply line	7	03-Oct-12	10-Oct-12	1					
A1030	Creating a room for site office, security room and store	4	12-Oct-12	16-Oct-12	0					
Geological Survey		5	17-Oct-12	22-Oct-12	13					
A1040	Collecting soil samples and testing	5	17-Oct-12	22-Oct-12	0					
A1050	Topographical survey	2	17-Oct-12	18-Oct-12	3					
A1060	Storm water drain	4	17-Oct-12	20-Oct-12	14					
Planning and designing		70	23-Oct-12	15-Jan-13	0					
Architectural Plan		5	23-Oct-12	27-Oct-12	6					
A1070	Obtaining plans and sections from Architect	3	23-Oct-12	25-Oct-12	0					
A1080	Obtaining elevation and 3D view from Architect	2	26-Oct-12	27-Oct-12	8					
Estimation		13	23-Oct-12	06-Nov-12	0					
A1120	Calculating total quantities	7	26-Oct-12	02-Nov-12	0					
A1130	Market rate survey	3	23-Oct-12	25-Oct-12	7					
A1140	Total costing	3	03-Nov-12	06-Nov-12	0					
Structural Plan		6	26-Oct-12	01-Nov-12	4					
A1090	Obtaining structural drawing from RCC Consultant	3	26-Oct-12	29-Oct-12	4					
A1100	Checking for earthquake resistant structure from RCC consultant	3	30-Oct-12	01-Nov-12	4					
A1110	Obtaining Design of overhead water tank	3	26-Oct-12	29-Oct-12	7					
Plan Sanction		57	07-Nov-12	15-Jan-13	0					
A1150	Administrative approval	12	07-Nov-12	20-Nov-12	0					
A1160	Technical sanction	45	21-Nov-12	15-Jan-13	0					

Fig 4: Planning and scheduling

OBSERVATIONS

It was observed that after planning and scheduling using Primavera the time duration was reduced by nearly 5 months (January 2015), whereas the actual completion date was June 2015. Hence after careful studying this software one can control the project in terms of duration hence leading to cost optimization.

CONCLUSIONS

Planning, monitoring and controlling, as well as the need and effectiveness of project management software like Primavera P6 in a construction projective of this study was to understand the role of monitoring and control in the progress and timely completion of a construction project. This objective was achieved through revision of literatures and methodologies involved in monitoring and control. The case study proved to be a guideline in understanding the progress of construction work and also to identify the specific problems arising during the process. Results of this study show the drawbacks of the present project management system in running project and the importance efficient.

The comparison between the existing building data and the revised data by PRIMAVERA is going to be studied. Keeping the right activities on right track is done. An efficient and cost effective new project management plan is brought to conclusion.

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