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Project Management Using Primavera P6

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Abstract: ***The construction industry is an Integral and developing part of nation's infrastructure and industrial growth. In that Construction sector construction manager's has to deal with lots of problems regarding time management and its limitations. Safety issues, change in nature work, budget constraints etc. According to previous observation and experience proper skillful management it is very essential to resolve and reduce these issues effectively. Primavera P6 software can overcome these issues adequately and efficiently. Effective time planning is very important in determining success of any project, poor planning and controlling of project will causes delay. In this project, primavera P6 software help the planning scheduling, resource allocation and time help the resource allocation and time management.***
Keywords: Planning, Scheduling, Management, Primavera, Controlling,

I. INTRODUCTION

Large construction project with huge budget it becomes very difficult for project team to handle the task so it becomes very necessary to provide tool in hand of project team that keep a track a activities. Primavera P6 software from product from Oracle is very powerful tool to present the efficient management in hands of project team. It helps in planning controlling and scheduling effectively. The quality of schedule generated from the software often lacks detail and the purpose of the software in adding value to the project is generally not met by the users in India. In addition to provide insight on various project tasks, their inter relationship, dependencies to predict total project duration during planning phase the schedule should be comprehensive enough to let the user understand in detail the purpose of various activities in the schedule. In today's world construction industry is one of the most widely used and rapidly booming industry of our nation and across the world. In this project we have studied a road project of 1 Km length by conventional method of planning and using primavera P6 software planning. Comparative study of both conventional and primary software is given and the primavera gives better results.

II. LITERATURE REVIEW

1) *Satinder Chopra:* concluded that the Activity ID and Activity Description both the most unused part can greatly enhance the quality of the schedule if used properly. It is the duty of the planning team to carefully decide the Activity ID structure in advance so, thatschedule preparation flows smoothly without any conflicts. Further research on how other fields like Original duration, Remaining Duration, Tasks bars in the Gantt chart, Start and Finish dates can be presented to give maximum understanding to the user for efficientschedule development
2) *V. Dhanalakshmi (2016):* Study deals with the projectmonitoring process of the economical method oftransporting a pipeline construction was completed in Ennore-Trichy-Madurai. Construction work and actual progress is a comparison between the planned progress of performed in this study using project management software Primavera P6.
3) *P. Esaki Thaana:* Found time management system isconsidered to perform a key role in organization, which is responsible to complete the project in a specific time, budget cost within a certain period of time. Poor time and cost performance are major problems faced by construction industry. The main objective of thisresearch is to prepare the proper planning and scheduling for the 6 lanes road work construction at VOC PORT TRUST, Tuticorin. Time management and time control are done by primavera P6 software. The main advantage of project was timely execution and completion of the project using primavera P6 software. The road construction project has completed prior to thecontract duration.
4) *Y. Umesh (2015):* Proper planning and scheduling is very essential in projects for sinking and scheming delays of the project. Extensive amounts of time, money, resources are wasted each year in a construction industry due to improper planning and scheduling. Withglobalization the construction projects have become infinite and complex. Planning of such projects requires huge amount of documentation work, which can be reduced with the help of project planning software. These study are to plan, schedule, and track a residential project with help of primavera software, study the results generated, it is possible to propose which method is suitable for the chosen residential project.

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5) *B.S.K.Reddy (2015):* They did resource optimization exercises on two on-going projects in Dubai, UAE. They individually leveled and then combined optionwith aggregated and then leveled clearly indicates reduction in demand of resources by 5.65% in later option, which could be best considered for economy. They concluded Resource leveling at project job site and forwarding demand leads a possible sharing of resources among projects.
6) *E. Suresh Kumar (2015),* Scheduling using Primavera Software is a development which involves estimation, sequencing the activities, resources allocation andtiming. The construction scheduling is to complete the project in time and equal the resources with the allocated time. Scheduling using primavera Softwaregives good controlling.
7) *Ismail Abdul Rahman:* study identified time management together with their effectiveness level in large construction projects. From the constructionorganization that deals with huge projects data was collected. Relative Importance Index calculation was employed to assess the level of effectiveness which is helpful for time management techniques and software adopted in the construction project.

III. STEPS INVOLVED IN SCHEDULING

A. Make Schedule

To make a schedule for any project, first of all collect data available for the project. Subsequently the following steps can be followed in Primavera.

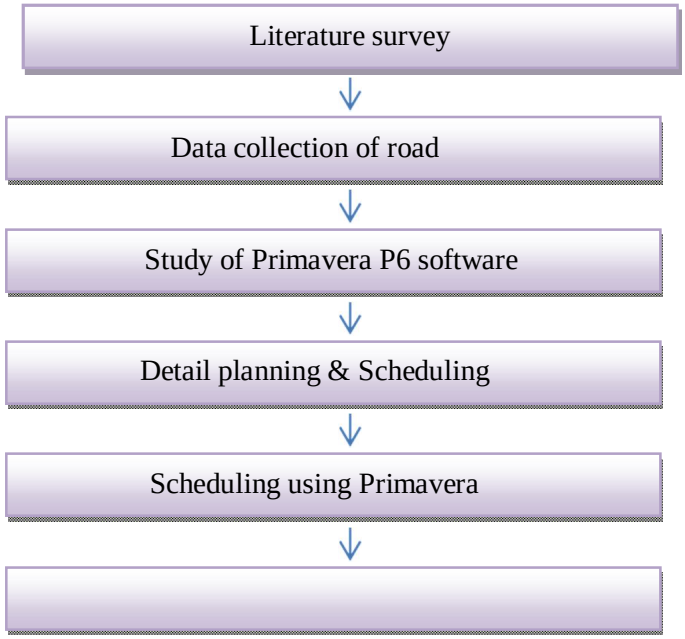
B. Creating EPS

To create an ideal schedule for any project, first step is to collect data available for the project. The following steps can be followed in Primavera P6 software.
Create the complete structure of the company with its branches, which is executing the project using primavera P6. This is known as Enterprise project structure (EPS).show in fig

C. Organizational Breakdown Structure (OBS)

After the EPS, OBS is made which is a hierarchical shape structure that shows the persons responsible for projects.

IV. METHODOLOGY



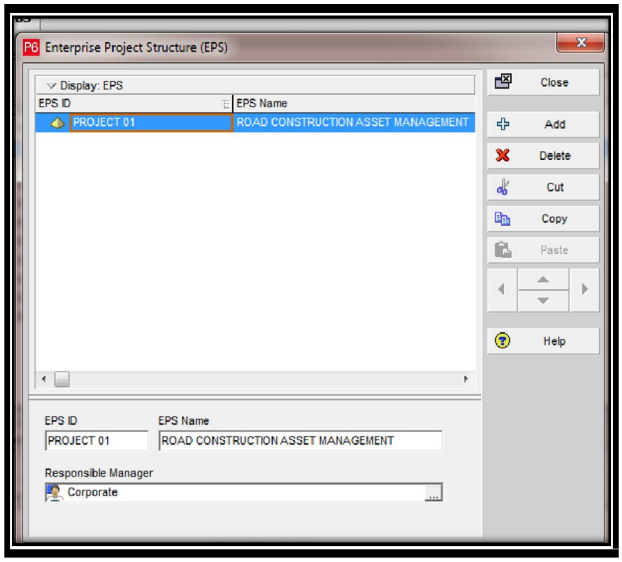


Fig.1 EPS

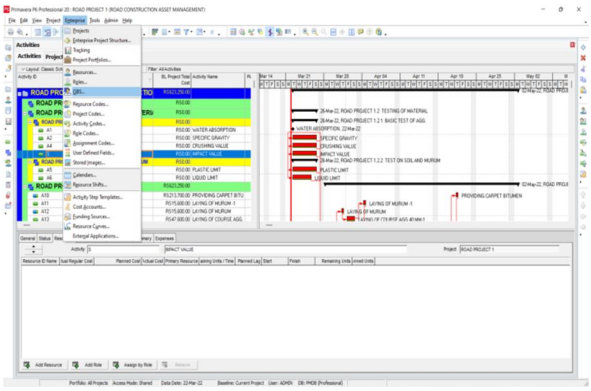


Fig.2 OBS

D. Work Breakdown Structure (WBS)

WBS elements have defined and organize the project elements. WBS is a hierarchy of a project work that must be accomplished to complete a construction project WBS hierarchy structure with top level WBS element being equal to that of each EPS node of the project. Each WBS element contains more detailed in WBS levels,Activities or both resource constrains.

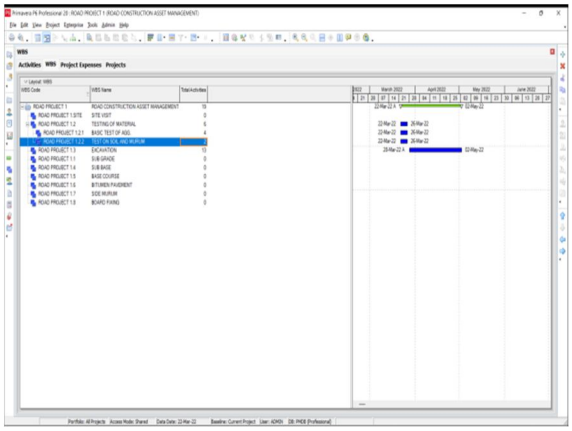


Fig.3 WBS

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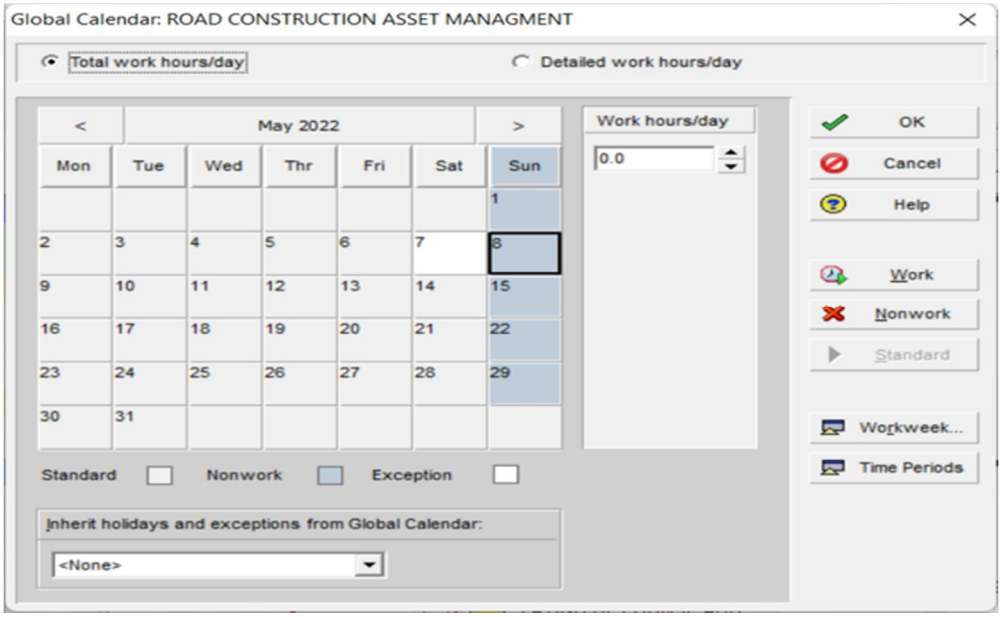


Fig.4 CALENDAR

E. Creating a Calendar

The calendar can create and assign it to each

These calendars define the available work hours in each calendar days. Also specify national holidays, workdays and resource. Fig no 4 shows calendar

F. Relationship Between Activity

By assigning succeeding, preceding activities with significant relationship to the overall project activities form a network, scheduling the activities should be connected to each other.

1) Finish to start (FS)
2) relationship Start to start (SS)
3) relationship Finish to finish (FF)
4) relationshipStart to finish (SF) relationship

G. Advantages

1) It helps easily prepare and control project things to do.
2) It optimizes management off resources.
3) It offers clear field of vision of what is taking in the project.
4) It allows quick and easy forecasting connected with WBS's things .
5) You can monitor progress along with view past period efficiency for credit reporting purposes.

H. Activity Dates

The following types of project activity dates available in the primavera; actual start, planned start, actual finish, planned finish.

I. Creating Baseline

A complete copy of the original schedule is a simple baseline plan which provides a target against which a project's performance is tracked. Choose project. Maintain baseline. Then add and save a copy of current project as a new baseline B1. Then choose project baseline as B1 and assign primary baseline as B1. Daily updates to be made. firstly Start date and end date. Choose the activity to be updated. Then in the activity details window, select status tab. Then tick mark started if the activity has been started and select the date. Tick mark finished if the activity has been finished and select the finish date.

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Comparison

Parameters	Conventional method	Primavera Software
•Planning and scheduling	In conventional method there is some inefficient planning	Proper planning and scheduling is optimized
•Management	Due to poor planning and errors results in improper management	Due to proper planning and using resources results in execution of work.
•Cost	Cost may vary due to errors	Cost remains constant throughout the work
•Controlling and monitoring	Due to manual planning difficulties in controlling the work	Effective controlling monitoring is achieved

V. OBSERVATION

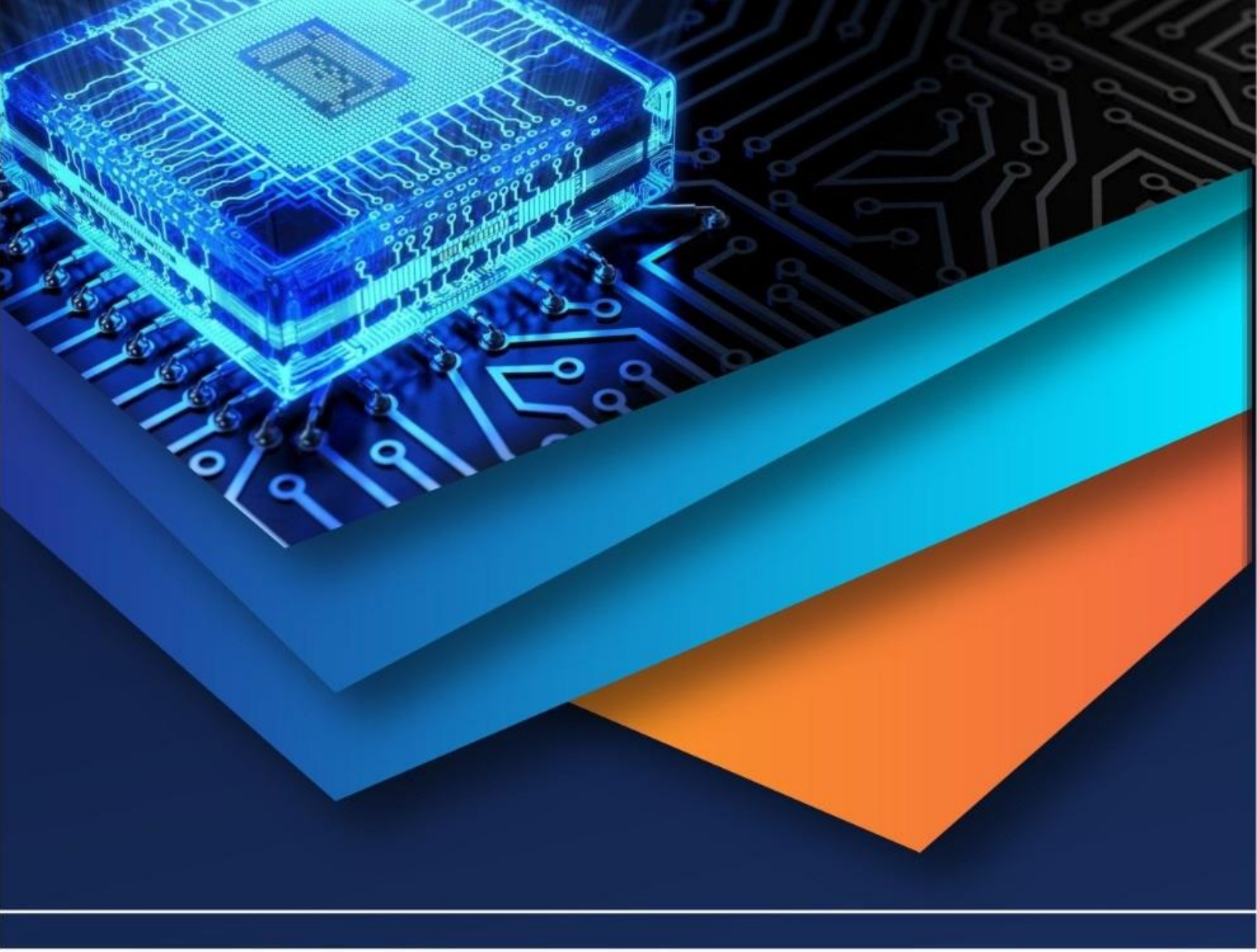
We studied a 1km length bitumen road. It was observed that after planning and scheduling using Primavera the cost was reduced by 47,970 and with conventional planning the cost was 6,71,200. By using Primavera software the cost was 6,23,230. Hence cost reduced by 7-8%.

VI. CONCLUSION

Planning, monitoring and controlling, as well as the need and effectiveness of project management software like Primavera P6 in a construction project of this study was to understand the role of monitoring and control in the progressand timely completion of a construction project. Delays in construction project is minimized by using primavera software. Effective handling of materials and resources is optimized by using Primavera. The study proved to be a guideline in understanding the progress of construction work and also to identify the specific problems arising during the process. Hence the study gives results about cost reduction and effective management of project. Results of this study show the drawbacks of the present project management system in running project. An efficient and cost effective new project management plan is brought to conclusion.

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