TIME AND SCHEDULE MANAGEMENT BY USING PRIMAVERA

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ABSTRACT

Time and schedule management by using primavera is a useful technique for modeling and
analyzing project management. This paper is a conceptual paper that Projects are expected to be
completion in schedule and help to project manager to control schedule while achieving
performance, quality and cost goals by proper planning and execution.

The benefits of primavera are using quantified data, allowing project managers to better
justify and communicate their arguments when senior management is pushing for unrealistic project
expectations. Proper risk management education, training, and advancements in computing
technology combined allow project managers to implement the method easily. In the field of project
management, primavera can quantify the effects of risk and uncertainty in project schedules and
budgets, giving the project manager a statistical indicator of project performance such as target
project completion date and budget.

1. INTRODUCTION

A project is composed of jobs, activities functions or tasks that are related one to the other in
some manner, and all of these should be complete the project.

Time and schedule management is absolutely essential for project success. Running out of time,
like running out of money, will bring your project to a halt.

Three other primary factors, which are also essential to schedule control, are: - managing
project costs, system scope, and quality, the first step in controlling a schedule “knows” what the
schedule is.

Scheduling is the allocation of resources. More specifically, scheduling in the mechanical
process of formalizing the planned function, assigning the starting and completion dates to each part
(or activity) of the work in such a manner that the whole work (or project) proceeds in a logical sequence and in an orderly and systematic manner.

Although no shortcuts exist for managing projects, some tools and practices can help prepare you for the job. Using project management software can organize your thinking and identify potential problems.

Before implementing primavera to schedule projects, participants should understand the processes involved in project management and the associated recommendations that help smooth implementation of software that helps you reach your goals.

1.1 Project management

Project management is the application of knowledge, skill, tools and techniques to project activities to meet project requirements. The elements of project management control include programmed objectives, policy restrictions, resource, constraints, government regulation, feedback and revision of objective.

Planning a project includes the following: working out when, where and who is going to do the project. The crucial part of successful project management, however, is the action you take after the project plan is created.

Using project management software you can organize your project and recognize potential problem. Project management software is used for making project management easier especially when you encounter difficulties.

1.2 Project Planning

Projects do not often succeed without careful planning. Planning of a project team to address the five critical factors that determine software program success or failure is: Quality, Cost, Schedule, Performance, and Supportability. [21, 22]

The project plan establishes common goals, expectations, terminology among the participants and stakeholders. To be successful, everyone must work on the same project – following the same plan.

Planning is essential to control a project. Planning [1, 3, 9, 25] establishes a baseline with which to gauge progress. If the project begins to deviate from the plan, action can be taken to put the project back on track.

An important purpose of the project plan is to have the project team go through the planning process. This allows the team to work together and rehearse the development of the project.

Team will evaluate risks, development life cycles, resource availability, budgets, and all other significant tasks. They will solve problems, which are encountered in project of work and will get a feel for the work before actually beginning the development work itself. Planning is not the same as having a plan. It consists of an ongoing process by which changes are incorporated in to the project in an orderly manner.

1.3 About Software (Primavera)

Computer software is a general term used to describe the role that computer programs, procedures and documentation play in a computer system.

Primavera[2,5,8,13,14,15,16,17,18,19,23,24] is special because project managers designed it for project managers. It helps you from the moment you begin thinking about a project. Building the original network and organizing the project data in primavera are simple.

Primavera enables you to store actual quantity and cost data per update period so you can compare historical information to the current period using resource profiles and reports.
1.4 Data Structure of Primavera

The above diagram represents the data structure of Primavera which is the base for adding a project.
The following steps are to be noted while setting the data structure:-

1. Set up the EPS: Enterprise Project Structure (EPS) is the hierarchical breakdown of division of the organization.
2. Set up the OPS: Organizational Breakdown structure (OBS) is the hierarchical breakdown of management (individuals) of the organization.
3. Set up the Resource: who are responsible for the activities.
4. Set up the WBS: Work Breakdown Structure (WBS) is the arrangement of work into manageable deliverables and sub deliverables.
5. Set up Calendars: define the work days, holidays and work timings.
6. The highest level of EPS is called Root which is subdivided into EPS nodes which helps in grouping the project.

Activities are grouped together to form WBS which are linked to the projects. Projects are controlled by the program managers in the OBS level, Roles are designated to resources which in turn control the activities, Calendars define work-shifts and holidays to activities.

2. BACKGROUND OF THE PROJECT

The schedule study of Al-Deesa site which is considered as one of (the 500 scheme housing project) in Ubari (Libya).

Name of scheme :- the 500 scheme housing project

The site :Ubari (Libya) and it divides into four sites:

1. Khelaif 128 scheme housing project.
2. Fejaj 120 scheme housing project.
3. Gabraun 112 scheme housing project.
4. Al-Deesa 140 scheme housing project.

Al-Deesa site

Name of project:- 140 scheme housing project in Al-Deesa site.

Owner's name:- Executive Company of Housing (government).

Executive name:-Awased Al-Madina company.

Supervising :- Al-Jeel company.

2.1 Percentage distribution of works in the project

The distribution ratio for each work on the project (Al-Deesa 140 scheme housing project) includes the costeffectiveness and the workload. The biggest ratio was a Structure concrete work (24%) and the smallest ratio was a Preparation work and leveling (2%).
3. RESULTS AND DISCUSSION

3.1 Activities

Figure 2.1: Percentage Distributions of Works

Figure 3.1: Project
After added duration of activities with start date and assigned all resources, you get duration of project (535) days, date of finish each activity and finish project (28 Fed 11), to get Budgeted total Cost (LYD 16,496,594).

3.2 Update Progress

After the project was running on 10\textsuperscript{th}-july -2010, I got repot on that date to compare the progress of project between the report and update from Primavera to check the real plan of project.

3.2.1 Update Progress of Project

The report from the project (Al-Deesa 140 scheme housing project) on 10\textsuperscript{th} of July 2010, the Completion percent of the project was (41.37\%), after the data collecting and calculated and the Completion percent for each work as show in figure (4.8), depend on Percentage distribution of works in the project.

![Figure 3.2: Update Progress](image-url)
### 3.2 Update Progress of Project (Primavera)

The Primavera Update progress must be after input data of project (WBS- Activity – Resource), the update progress in the project (Al-Deesa 140 scheme housing project) on 10th of July 2010, the Completion percent of the project was 76.72%. Remaining duration (201) days and actual total cost up to this date 10th of July 2010 was (LDY 13,805,542) as show in figure (4.9), and the Completion percent for each work as show in figure (4.10), depend on Percentage distribution of works in the project.
Figure 3.4: Primavera Update Progress

In figure 4.13 showing a compare reported progress between site's report and Primavera's report. The delay of (Al-Deesa 140 scheme housing project) was 46.07% according to Primavera report on 10th of July 2010.
SUMMARY AND CONCLUSION

This study was used to monitor the projects by Primavera, it studied (Al-Deesa 140 scheme housing project) Libya, through the use of Primavera effect in the project. Conclusions can be summed up with the following:-

- Studying activities of the project has been done by using Primavera which describe easily each of activity of the project including the cost and time schedule for project.
- Analyzing the input data of the project and reporting the output data by which the ability for comparison between the original plan of the project and the required date of the project can be performed.
- Assessment of the project has been done according to the results data of the project by using primavera from which the delay period of the project is been calculated

REFERENCE