Software Project Management

Name Song Tianyu number 13211135
Zhejiang Normal University
Software Project Management

1 Introduction

Software Project Management is a sub-discipline of project management in which software projects are planned, monitored and controlled.
Software development is a complex process involving such activities as domain analysis, requirements specification, communication with the customers and end-users, designing and producing different artifacts, adopting new paradigms and technologies, evaluating and testing software products, installing and maintaining the application at the end-user's site, providing customer support, organizing end-user's training, envisioning potential upgrades and negotiating about them with the customers, and many more.

2 History of Software Project Management

The origins of project management software are rooted in the 1950s when Dupont Chemical collaborated with mainframe computer maker Remington Rand (Univac) to devise the Critical Path Method of network scheduling (CPM). This method was tested in 1958 with the construction of a major new chemical plant. In parallel, the US Navy working together with Lockheed Aerospace devised the automated Project Evaluation Review Technique (PERT) for the Polaris Missile program that ran on the IBM mainframe. Mainframe and Mini computers dominated the project management software arena until the early 1980s when PC computers began to proliferate across business and government circles alike.

3 Overview

Software project management encompasses the knowledge, techniques, and tools necessary to man-age the development of software products. This cur-riculum module discusses material that managers need to create a plan for software development, using effective estimation of size and effort, and to execute that plan with attention to productivity and quality. Within this context, topics such as risk management, alternative life-cycle models, develop-ment team organization, and management of tech-nical people are also discussed.

4 Methods/Techniques

Software is said to be an intangible product. Software development is a kind of all new stream in world business and there’s very little

experience in building software products. Most software products are tailor made to fit client's requirements. The most important is that the underlying technology changes and advances so frequently and rapidly that experience of one product may not be applied to the other one. All such business and environmental constraints bring risk in software development hence it is essential to manage software projects efficiently.

4.1 Resource management

All elements used to develop a software product may be assumed as resource for that project. This may include human resource, productive tools and software libraries.

The resources are available in limited quantity and stay in the organization as a pool of assets. The shortage of resources hampers the development of project and it can lag behind the schedule. Allocating extra resources increases development cost in the end. It is therefore necessary to estimate and allocate adequate resources for the project.

Resource management includes -

- Defining proper organization project by creating a project team and allocating responsibilities to each team member
- Determining resources required at a particular stage and their availability
- Manage Resources by generating resource request when they are required and de-allocating them when they are no more needed.

5 Conclusion

Software project management comprises of a number of activities, which contains planning of project, deciding scope of software product, estimation of cost in various terms, scheduling of tasks and events, and resource management.

Acknowledgments

I would like to thank my assistants and reviewers for taking time out of their valuable schedule to help make this report more concise and clearer.