The SPM - Software Project Management

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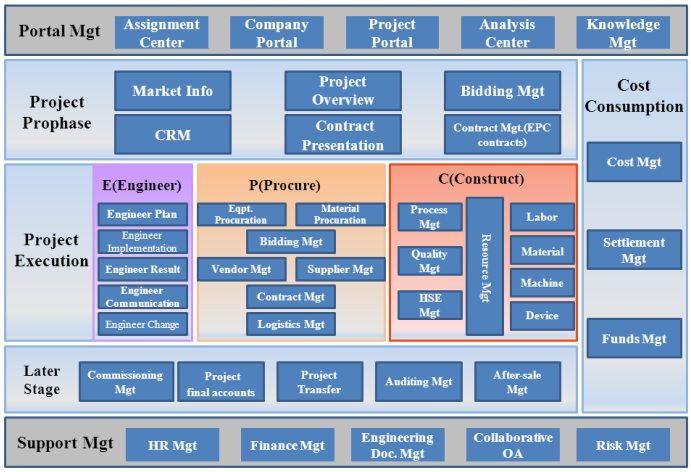

Figure 1: *A simple view about the life cycle of project.*

Abstract

At the beginning of this class, the aim of this paper is to show about what is Software Project Management and to figure out how important it is during this day. This paper describes the importance of the Software Project Management. From the point view of when did the people create it ,what is its background, how does it effects the people, the product, the process, and the project. Detail information has been acquired by the author using the website, the books from the library, some of the TED speech. The result shows that the fundamental purpose of Software Project Management is to let the software project especially some large projects under the control of managers. In purpose of finishing the work on schedule, make the cost in control, to assurance the quality of the software. According to the research, the conclusion are following: A good software needs a good management, and a good management running through the whole life of the project.

Keywords: Software Development, Project Management, Software Quality Assurance, Software Configuration Management

1 Introduction

The introduction sells your computer graphics submission. It tells the reader about the key effects and motivation. It tells the reader about why it is important. Your introduction should be clear well defined paragraphs (e.g., [Day and Gastel 2012]).

- What key effects are you showing?
- What is the motivation? (What's so interesting and important?)
- Why is it hard? (e.g., why do naive approaches fail?)
- Where has the effect been used before or what are you doing differently? How does yours differ?
- What's your approach? How do you implement your different effects? Are their any specific limitations?
- (Optional) How the rest of the report is structured.
  e.g., The rest of this report is structured as follows: first we discuss the related work in section 2, and then describes the implementation in Section 3. Section 4 describes how we intent to evaluated our submission. Section 5 gives the conclusions.

1.1 Software Project Management: Project management software has the capacity to help plan, organize, and manage resource tools and develop resource estimates. Depending on the sophistication of the software, it can manage estimation and planning, scheduling, cost control and budget management, resource allocation, collaboration software, communication,decision-making,quality management and documentation or administration systems.

1.2 History: 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.[Maria Kielmas]

Software project management is put forward in the United States in the mid 1970s.?The U.S. defense department devoted to figure out why software development cannot be submitted on time? Budget is go beyond the expect and the quality is not up to the requirements of the user. The results showed that 70

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1.3 Importance: Software project management is very special compared with other project management.First of all, the software is pure knowledge products, the development progress and the quality is very difficult to estimate and measure, the production efficiency is also difficult to predict and guarantee.Secondly, the complexity of software system also led to difficult to predict and control the risks in the development process. Like the Windows operating system has more than 15 million lines of code. At the same time there are thousands of programmers in the development, there also have hundreds of project managers. Such a huge system without good management, the quality of the software is hard to imagine.The content of software project management mainly includes the following aspects: members of the organization and management, software metrics, software project planning, risk management, software quality assurance, software process capability evaluation, software configuration management.

1.4 Rest: The rest of this report is structured as follows: first we discuss the related work in section 2, it's about the wonderful book the recommend to read and some articles and then describes the implementation in Section 3. Section 4 describes how we intent to evaluated our submission. Section 5 gives the conclusions.

2 Related Work

This is a classic on the human elements of software engineering first published in 1975. The technology has changed a lot in this time, but the human elements of software engineering have remained the same. It is a wealth of insight, often quoted, and very well known in the industry. The Mythical Man Month describes many commonly occurring problems in large and mid-scale development projects and breaks them down. Here are a two of the books important principles.

The Mythical Man-Month: Adding manpower to a late software project makes it later.[Brooks 1975]

No silver bullet: There is not a single strategy, technique, or trick that can exponentially raise the productivity of programmers.[Brooks 1987]

I recommend this book not only for programmers, but for anyone managing a software project. Project managers and programmers alike will appreciate Brooks clear, well-thought out points. by Jess Johnson in Books Tools.

The ACM A.M. Turing Award is an annual prize given by the Association for Computing Machinery (ACM) to "an individual selected for contributions of a technical nature made to the computing community". It is stipulated that "The contributions should be of lasting and major technical importance to the computer field". The Turing Award is generally recognized as the highest distinction in computer science and the "Nobel Prize of computing".

3 Methods/Techniques

- Software Quality Assurance Software quality assurance (SQA) consists of a means of monitoring the software engineering processes and methods used to ensure quality. The methods by which this is accomplished are many and varied, and may include ensuring conformance to one or more standards.SQA encompasses the entire software development process, which includes processes such as requirements definition, software design, coding, source code control, code reviews, software configuration management, testing, release management, and product integration. SQA is organized into goals, commitments, abilities, activities, measurements, and verifications.[Nielsen 2010]
- Software configuration managementIn software engineering, software configuration management (SCM or S/W CM is the task of tracking and controlling changes in the software, part of the larger cross-disciplinary field of configuration management. SCM practices include revision control and the establishment of baselines. If something goes wrong, SCM can determine what was changed and who changed it. If a configuration is working well, SCM can determine how to replicate it across many hosts. The acronym "SCM" is also expanded as source configuration management process and software change and configuration management. However, "configuration" is generally understood to cover changes typically made by a system administrator. 828-2012 IEEE Standard for Configuration Management in Systems and Software Engineering. 2012

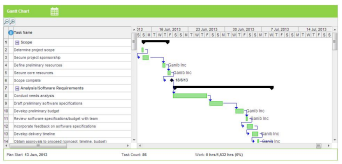

Figure 2: *Project Management Software - A new kind of software that was design to manage the other process.*

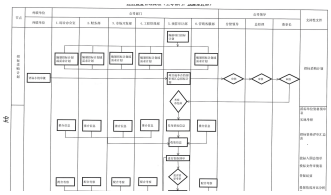

Figure 3: *Flow diagram - To make it easier to know the step of the program.*

4 Conclusion

A good software needs a good management, and a good management running through the whole life of the project.

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