Software Development Processes

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Abstract

schedule management is an important part of the software development process management. From the concept of schedule management, this paper analyzes the importance of schedule management and the factors affecting software project schedule, the last on how to make progress management puts forward my own point of view.

Keywords: schedule management. The software development process, project plan, quality control, milestone

With the rapid development of information technology, the software project scale expansion, able to finish on time, quality and quantity of their software project software development of the enterprise to the less, the vast majority of software projects are to extend the working hours, to reduce the quality or over budget. The cause of this situation are various, inadequate demand analysis, demand change management are insufficient, lack of good project plan, team communication and so on, in the final analysis is the lack of effective software development process management. The schedule management as an important part of the software development process management, throughout the software life cycle, is the key to the success of a software project. The author participate in the development of a number of large and medium-sized project, schedule management to talk a bit in the process of software development.

1.The concept of a schedule management

Schedule management is to point to in the process of the progress of the project, in order to ensure that within the prescribed time, achieve the goal of the project, the schedule of project activities and their implementation of the management process. And schedule for the plan of schedule management including progress control two parts. Schedule planning refers to the hardware and software according to the existing resources and project the actual needs to develop a reasonable and economic project activity schedule. Schedule control is to point to in the process of execution schedule supervision, project plan execution, timely find the deviation of the actual schedule and plan to analyze its reasons, and take necessary remedial measures in place to ensure that the software project progress is a kind of management means.

Project plan is the basis of schedule management, schedule control is the core of schedule management and goals. Schedule management is designed to make the development team to, according to the basin to complete it in time, the quality of software.

2、The importance of schedule management

In the process of software development, when there is a phase deviation from actual development progress and the development plan, if there is no effective progress management necessary to remedy or adjustments, the subsequent will all the work of the mire, into the disordered state. Over time, the project will enter a person not controllable state, lead to project failure.

Instead, can effective schedule management from many aspects to ensure the normal conduct of software development activities, the development team according to the development of the software development plan to complete the project, to the software enterprise to bring the immediate interests. The importance of schedule management can be summarized as the following:

2.1. Ensure that the software product delivered on time to the user

Schedule management is the most direct aim is to ensure that the software product can timely delivery to customers to use, and is also the biggest schedule management function. If there is no schedule management, project schedule will be out of control. Schedule is out of control in the most direct consequence is the product can't timely delivery to the user. For user hope will be put into operation the product as soon as possible, this is clearly a serious consequences, even if they don't rush to make the products are running, progress control will increase the burden of the user, including time, manpower and material resources to continue.

2.2. Ensure that the cost of software project is not over budget

The consequences of software project did not perform as planned in addition to delay the construction period,

Also to the software enterprise poses another problem - the project cost under budget. Nowadays, in the case of less profit, cost savings almost become the only way to increase profits. So, almost all of the software enterprises are very emphasis on project cost control.

If there is no effective schedule management mechanism, the actual schedule delays in the project plan things will happen often, software enterprises will have to increase the manpower and material resources in order to make project step back on track, or to extend the development time. Regardless of what option for software enterprises will increase the investment project, the project cost under budget.

Good progress management mechanism can control the practical work of the degree of deviating from the plan, timely detection, analysis the reasons of the deviation, and take the appropriate adjustment measures put work back on track. The timely adjustment will save a lot of unnecessary waste of resources. Due to demand, for example, to understand the error, the function module needs to be adjusted, its workload is equivalent to the implementation. But if before the developers to write code to review its detailed design or implementation ideas for inspection, the discovery of the error in time and to adjust, you don't need to waste of manpower and time consumed by a rework, natural saved costs.

2.3. Guarantee the quality of software

Quality control and progress control is interaction and complementary to each other. The quality of software, progress would be easy to follow. On the other hand, the progress to keep up with the have more sufficient time to guarantee the quality of software

Today, the software project progress is procrastination is a common phenomenon. Most of the cause of this phenomenon is the quality problem. Due to the software quality closes nevertheless, release products found in a lot of bugs. Now have to spend a lot of time to catch the bugs, progress will be affected. Likewise, if a software project schedule were delayed, enterprises in order to catch time limit for a project are likely to ignore the quality of the products. Although the function of the product at the end of the time limit for a project is completed as scheduled, the quality of the product can't satisfy the user.

This shows, the stand or fall of schedule management directly influences the quality of software products, good schedule management is the guarantee of product quality.

2.4. Ensure that the software enterprise's reputation and market position

For many users, the software companies can deliver products as planned represents the enterprise software development capabilities and credibility. If the product is of users to run the product, so delayed delivery is bound to the user suffer, cause users to mistrust of the developers, that affect the cooperation again. Even running software products are not in a hurry to launch, delay delivery will also left a bad impression to the user, a bad software business. If, on the other hand, is developing the software product is closely related to market opportunities, is the product of the delay is likely to lead to other software enterprises force, or out of date due to loss of market opportunities. So, effective progress management of software enterprise's reputation and market activities are very important.

3 Absence made software for the project schedule

Factors affecting software project schedule is varied, the different software companies, different projects and different structure for different reasons. The main cause of affecting software project schedule are:

3.1. The demand factors

Requirements management is a very important part of the software development process management. While software companies pay more and more attention to the needs of the project management, but the demand factor is still the most important factor of the influence of Taoism on the software schedule. Inadequate demand

factors include two parts: demand analysis and requirement changes frequently. Insufficient margin for analysis and requirement changes frequently are complementary to each other. Inadequate demand analysis, the uncertainty of seeding and led to the demand change frequently. On the other hand, the rolling and frequent changes also illustrates the analysis of the Confucian o thoroughly.

Demand changes the developer repeated on the same function point (2, 3 times even 5 times...). Take time, it is bound to affect the overall progress of the software project. At the same time, demand for frequent changes will also affect the quality of software products. For example, if A change affects the module B, requirements change after only modify module and ignoring the module B, the module B cannot appear normal.

3.2. Lack of good project plan

The lack of a reasonable project plan is also one of the important reasons affecting software project schedule. Good project planning can be overall planning project schedule and each stage of human and financial resources allocation of resources, improve the use of enterprise resources

Rate, make the enterprise information and muddy better service for the project, ensure the project schedule.

At present, a few small software enterprises, under the leadership of pressure, make out the actual project JiLiu - short development cycle, less resources for people, a factor is not all. Even some of thousands of people and passed the certification of the CMM LEVEL3 large software companies, due to demand or the uncertainty of the interface with a third party to work out a reasonable project plan. So there is no reasonable project plan of the project, the schedule cannot be guaranteed.

3.3. The lack of effective management

In the process of the implementation of the project plan, if at some point the practical work with the project plan is far, effective schedule management will play a crucial role - by calling more human resources, increase the intensity of work, or change the project plan to make project back on track. If the lack of effective schedule management, the phase deviation of unresolved, progress has been delayed. The next stage and the emergence of a new deviation, then the next stage... And, finally, the project schedule deviating from the plan. So, no effective progress management, software project progress cannot be guaranteed.

3.4. Lack of team communication

Each other in the process of development, using the interface, code reuse, and so on are often happened, and use the interface to each other, such as code reuse involves multiple developers. Therefore, good team communication will get twice the result with half the effort, and the lack of communication task is likely to need to rework, affect the project schedule.

Many software companies, project requirements in a few hands of one or two people (general project manager), developers understand little on demand. Therefore, the developer developed program is no guarantee quality. It is also a sign of a lack of communication. The project team should study before the start of the coding, control requirements, rather than in the process of development to realize the demand.

3.5. Lack of quality control mechanism

Comprehensive quality control is a software product quality guarantee, is also important means to assure the software project schedule. At present, many projects in order to catch time ignored the quality of the products, on the surface seems to completed the task, good project progress as planned. The actual is not the case, the software product quality $, be sure to delay the project schedule repeatedly modified bugs in the future.

The causes of quality problems are many, such as part of the software engineer of the sense of responsibility is not strong, Jr., a software engineer level is not high, the lack of code review mechanism, the lack of strict comprehensive test and so on. So, strengthening the development team's responsibility, improve the skill level of team, establish a good code review mechanism and strict on products is conducted by comprehensive test is an effective way to improve the quality of software products.

4 How to do schedule management

Since the schedule management is so important, so, software enterprises how to make progress management? Admittedly, completes the schedule management involves many aspects, which on the one hand, not all may affect the project schedule. The author thinks that, the software enterprise staff can make schedule management from the following several aspects:

1). Make good project plan

2). Attaches great importance to the milestone management

3). Set up a weekly meeting system

4). The examination of the strict schedule

5). Set up quality control system

5 conclusion

How to schedule management is urgent to solve the problem of sweet a lot of software enterprise, also make the software delivered on time, save costs and ensure the quality of the important way. In order to realize effective schedule management involves many factors, in this paper, based on the analysis of these factors, how to make effective progress management put forward its own views.

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