Software Development Processes

Author Name (陆柄华)*
University Name
Software Project Management

1 Introduction

We address the following concepts in this article:

- ✔ Project Characteristics and Considerations
- ✔ Software process models
- ✔ Selecting process model(s)

2 Overview

Software Process : the set of activities,methods,and practices that are used in the production and evolution of software. Software Process Model:one specific embodiment of a software process architecture. Project Considerations: Control systems Information systems General applications Specialized techniques Hardware environment Safety-critical systems Imprecise requirements

3 Methods/Techniques

In this section, you should put together some of the technical details of your graphical scene. This will help when developing your physics-based graphical scene later.

- Technical Constraints Type of the system to be developed Risks and uncertainties of the project User requirements concerning implementation
- Technical Approach Selected methodology or process model(s) Development methods Required software tools Target hardware/software environment
- Technical Implementation Development environment Maintenance environment Training
- Technical Implications Project products and activities:effect on schedule duration and overall project effort. Financial:report used to produce costings

3.1 Software Process Models

A list of common mistakes you should avoid:

1. Waterfall Mode
2. V Model
3. Spiral Model
4. Prototyping Mode

4 Conclusion

We must learn to flexible use of various models, and grasp skilled. Waterfall model (life cycle method, is the most commonly used method of life cycle development model), it will develop into the process of software project, requirement analysis, software design, program code, software test and operation maintenance of six stages, defines them from top to bottom, suitable for large-scale software development process.

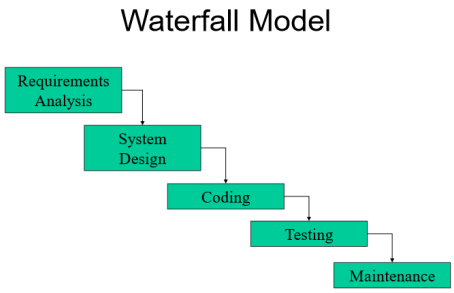

Figure 1: *Waterfall Model (cont'd) classical one-shot approach effective control limited scope of iteration long cycle time not suitable for system of high uncertainty the sequence of events for the waterfall models are analysis,design,coding,testing,maintenance.*

Transformation model (model) is based on the rapid development of a prototype, according to customer's feedback and Suggestions, to improve the prototype, until eventually evolved into a software product.

Spiral model: combining waterfall model and the transformation model, and an increase in the risk analysis;

Fountain model: for software reuse and a number of development activities in the life cycle integration provides support, is a kind of object-oriented development method;

Intelligent model: the software development model based on knowledge, combined with expert system, is a rule-based system;

V model: test centered development model;

The elementary element of the incremental model: is a mixture of the waterfall model (repeat) and prototype implementation of iteration characteristic; It USES as time progress and staggered linear sequence. Its biggest advantage is flexible staffing;

RAD (rapid application development) model, it is an incremental software development process model, to highlight the very short development cycle. It is using component-based development method.

XP model, it is a kind of lightweight (agile), high efficiency and low risk, flexible, predictable, science, and fun way of software development. It is composed of values (communication, simple, feedback, and courage), principle (quick steps away), practice and behavior of four parts Model. RUP (RationalUnified Process) method is a unified software development Process, is also a universal Process framework, can be applied to many areas of project development, it is based on component, using the modeling language UML, it has three characteristics: use case driven, centering on the basic architecture, iterative and incremental. The software process on time is divided into four stages: initial stage – the elaboration phase, construction phase, phase of delivery.

References

*e-mail:Authors Email

Software Project Management (2016/17)
Author Name: Author Name ()
University: University Name
Title: Software Development Processes
Supervisor: Dr. Kenwright