

A Preproduction Process for a Video Game with an SPL Approach

Mario González Salazar
Cuauhtémoc Lemus

CIMAT, A. C. - Unidad Zacatecas
Blvd. L. del Patrocinio #102
Fraccionamiento Lomas del Patrocinio
C.P. 98070
Zacatecas, Zacatecas, México
+52 492 998 1529



Agenda

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Video Game Development Complexity

Video Game Development is a multidisciplinary task. People from different fields need to work together to create a video game. Writers, musicians, game designers, graphics artists, programmers and so on.

Video Game Goal is to entertain. How to make the game experience entertaining?



Video Game Development Process

There are three main stages in video game development:

Preproduction: the goal is to design the game. Specifying all aspects the game must contain (rules, aesthetics, characters, interfaces...). The principal output of preproduction is the GDD (Game Design Document).

Production: the goal is to create all assets specified in the GDD and put it all together, as a software product.

Testing: the goal goes beyond debugging or even validating some traditional quality attributes. The player experiences through playing the game need to be validated.



Video Game Development Problem

A challenge that rises is the translation of the preproduction work to the production phase

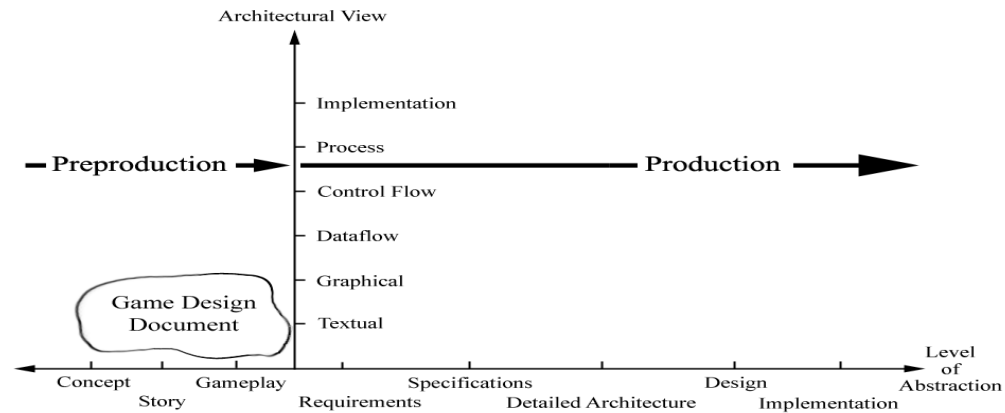


Figure 1. Video game development From: Callele, David et. al. (2005) Requirements Engineering and the Creative Process in the Video Game Industry during Proceedings of the International Conference on Requirements Engineering (RE'05), IEEE Computer Society, Paris, France, 29 August–2 September 2005, pp. 240–252.



An Idea

A preproduction process for a video game with an SPL approach that can generate proper documentation for the production stage, can help to reduce the transition time between this stages and help to adopt a strategic reuse approach.



Sub-problems

What the production stage really needs?

How requirements related to the player experience (like enjoyment of fun) can be specified and validated?

How to define a repeatable process for preproduction stage without limiting the creativity on the stage?

How the process can support an SPL approach?



Plan

Define what production stage needs: Create a repository and fill it with game studios information.

Find a way to specify and validate players experience requirements: Define the phases when these requirements need to be specified and validated inside preproduction. Find the best way to refine these requirements so they become less abstract.

Define a flexible process to support a software product line approach: Include a commonality and variability analysis on the process, and differentiate between domain engineering process and application engineering process.



Questions?

Write me at: remylebv@cimat.mx

