

White Paper

Game Mechanics and Macro Level Project Management

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Introduction

Whilst project management has historically been approached from either a waterfall or agile methodology, the higher-level strategy as to how to manage multiple serial or parallel projects in a larger organization is an open field in which to explore alternate methodologies.

In game mechanics various systems of rewards are used in massively multi player games to reward a group of individuals for accomplishing some difficult task. The systems allow for a set of players to work together for a common reward but still permits for individual excellence.

In this paper we will discuss the use of game mechanics as a way to both accelerate development through prioritization and to reward the top performing employees in the organization.

Problem Overview

The typical structure of a large software development organization has tended to lean towards a collective of compartmentalized project teams. Employees or resources remain in a sedentary state in niches of technology and are not generally exposed to the larger challenges at hand within the organization. As a result of this macro level structure, resources are not rewarded for efforts on past projects and generally have reduced ability to move throughout the organization. This presents multiple issues for the organization at a higher level. Most importantly, domain level knowledge is generally created and sequestered to a small number or single resources and can be lost easily over time.

A Game Theory Approach

At a macro level, the game mechanics approach can be applied as a concise set of rules that provide a simple set of goals for teams and individuals to achieve rewards for the successful completion of high quality projects. These rules can be defined as follows:

1. Total number of points assigned to project based upon complexity and time frame of project. Assigned by leadership team.
2. Successful completion of a project determined by metrics assigned by leadership team but standardized across the organization. Budget, timeline, velocity and defect rate should be considered key items.
3. Individual points from dragon kill point total delivered based upon the experience level of the role of resource on project.
4. Points can be gifted from one member to another on the team and point accruals can be used to “buy” into new projects.
5. Point total levels allow resources to achieve new skill levels and gain physical rewards.

These rules are used to reward members of the team based upon the position within the group they occupied for a given project (lead developer, lead architect, project manager, release manager). The accumulated points could then be used by any individual to “buy” into an upcoming project within the organization.

Projects should be given a set of reward points as tasks are given points in game mechanics. These points are agreed upon by a group of individuals at the program management and VP levels with input from the various architecture teams. Effectively a difficult project could be scored as a high number either based upon timelines or technical requirements.

Conclusion

TBD

