

Chapter 3

Micro Studies of FOSS Ecology

ABSTRACT

Sourceforge.net is the largest portal hosting Free and Open Source Software (FOSS). Among the projects available in sourceforge.net, six top ranked projects are selected for studying global volunteer collaboration patterns over a period of 6 years (2005-2011). It is found that a small set of volunteers do most of the work in these projects. The growth rate of volunteers, identification of core developers, join and drop rate of volunteers, task allocation and rate of task completion, movement of existing volunteers among different projects and the rate of new volunteer inclusion are also studied.

INTRODUCTION

The macro studies discussed the essential characteristics of the FOSS ecology. The size and nature of the projects and developers involved in FOSS development in a large project eco-system like Sourceforge.net were discussed. But the studies were limited in their scope. The important metrics like number of developers working on each project, their movement in the ecology, number of tasks which come up in projects and how effectively they are completed cannot be studied for all 150,000 projects. Therefore, it becomes necessary to study the important features of FOSS development by selecting few projects and subjecting them to rigorous analysis.

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Selection of Projects for Micro Analysis

To select few projects from a large pool of projects currently active in Sourceforge.net, the following options were available

1. Randomly choose few sample projects
2. Select one project from each year
3. Select projects which meets certain criteria

Random selection was rejected because the intention of the current study is to rigorously analyse the projects to detect common pattern among them. Choosing a project from every year would be beneficial if the focus of studies was time-series analysis of the evolution of FOSS. Therefore, the appropriate method is to select those projects which meet certain identified criteria.

The requirement for such a study would be to select those projects who have been proved successful. In traditional software world, quantifying success is easy because there are metrics such as number of sales. But in FOSS ecology such a metric loses its significance. Therefore, it was decided to use a metric identified by the Sourceforge.net as the measure of success.

Table 1. Structure of table STATS_GROUP_RANK_BYMONTH

Column	Type	Modifiers
group id	integer	not null default 0
rankdate	integer	not null default 0
ranking	integer	not null default 0
percentile	double precision	default 0.0
score	bigint	not null default(0)::bigint

Table 2. Top ranked projects in Sourceforge.net

Project-Id	Name
1	SourceForge.net
235	Pidgin
84122	Azureus
162271	Openbravo ERP
176962	ADempiere ERP Business Suite
196195	PostBooks ERP

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