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How free software developers work. The mobilization of "distant communities".

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Description :

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Nous abordons dans cet article la question des incitations à participer au développement d'un logiciel libre. Nous avons réalisé un travail d'enquête auprès des développeurs de logiciels libres français (et aussi des personnalités défendant cette forme de production, les « figures » du libre). Notre objectif a été de déterminer l'importance respective de ces motivations et éventuellement d'en identifier d'autres, ainsi que de définir les caractéristiques des personnes impliquées dans ces projets.

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ABSTRACT.

We analyze the question of the incitations for a developer to participate to FLOSS (Free-Libre-Open Source Software) development. We have interviewed some French developers and personalities advocating this form of development (FLOSS "figures"). Our goal was to determine their motivations, the relative importance of these motivation, and the characteristics of people involved in such projects.

Keywords : FLOSS, incentives, developers, production organization.

Introduction.

Free software are programs distributed with their source code (the text of the program written in a programming language that is comprehensible for humans) and with the authorization to modify and redistribute them freely, which differentiates them radically from private or "proprietary" software.

Their development is based on the participation of volunteers within a cooperative organization that relies a great deal on the organizational facilities provided by the Internet.

This configuration leads to questions on the characteristics of the collective action that enables the transition from individual voluntary commitments that are potentially volatile and unstable to the completion of a collective production that involves continuity and sustainability. The production of free software cannot be considered the contingent result of a spontaneous convergence of individual, independent commitments. It presupposes certain forms of motivation for the participants to work, who are in turn capable of ensuring a certain continuity in their commitments and of coordinating the organization of their contributions. Because even if a software program is a text, it is an "active" text that works insofar as it is made up of a list of instructions that are automatically executed by a machine, which requires an extremely strong coherency of the different parts of the text (Horn, 2004).

Empirical preliminary observations show that developers have a wide range of statuses (students, employees of research centers or private companies engaged in activities related to free software or not at all...) This infers heterogeneous links between the activity of developing free software and salaried work. The former can take place outside of working (salaried) hours, exclusively or not, but it can also take place during working (salaried) hours and thus can be, according to the case, hidden, tolerated, unofficial, official, required, recognized or valued. The

development of free software takes place within plural legal and temporal systems.

These heterogeneous figures extend well beyond the scope of volunteer work and they indicate also another stake in this productive activity : the cooperation between contributors without which it would be impossible to develop a useable product. Yet, in general, these contributors are not enrolled in the same organization, are dispersed, have computer-mediated relationships via the Internet, and are not linked by the lines of an organization chart (Gensollen, 2004)

The absence of direct, codified and prescribed interaction between the producers is counterbalanced by sharing the sense of belonging to a specific group with a strong identity. At least this is how we can interpret the repeated references to "free communities" on the part of contributors. This indigenous terminology does not reveal its true meaning immediately, but it provides a clue to understanding the way the collective activity is carried out in the absence of organizational levers that usually make up the framework of work activities and the participants at work.

The work of free software developers is therefore both an individual activity carried out in extremely heterogeneous conditions and a collective action with original production methods. We propose to analyze this work starting with the paradoxical notion of a "distant community", that aims to illustrate the tension between, on the one hand, the strength of the sense of belonging to a specific world identifiable in the discourse of the participants and, on the other hand, the distances that separate the contributors in terms of relationships, status, and background. In doing this the aim is to produce a description, necessarily plural, of the different forms of "distant communities" that enables the production of goods in unique social and organizational conditions. More generally speaking, this notion points to methods of coordination that combine two forms of collective action that are usually contrary and antagonistic : a communitarian form based on the subjective feeling of belonging to the same community and a form of partnership based on the coordination of common interests and sharing of objectives (Tönnies, 1887, Weber, 1921).

At first, we will examine the ways the individual participants organize themselves in order to contribute to a project and we will focus on the forms of cooperation and coordination used to deal with the constraints of efficiency and quality associated with the distribution of a product. Secondly, we will look at the other side of the coin and examine the ways individual participants take action and we will underline the mechanisms of commitment and participation that account for their contribution to the production of free software. These two dimensions, that in our opinion are inseparable, are explored through a survey carried out with free software developers1.