



## A man on the inside: Unlocking communities as complementary assets

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### Abstract

Since Teece's seminal paper explaining who were the gainers from technological innovation, increased globalization and the information and communication technology revolution have brought new ways for firms to organize and appropriate from innovation. A new more open model of innovation suggests that firms can benefit from sources of innovation that stem from outside the firm. The central theme of this paper is how firms try to unlock communities as complementary assets. These communities exist outside firm boundaries beyond ownership or hierarchical control. Because of practices developed by communities to protect their work, firms need to assign individuals to work in these communities in order to gain access to developments and, to an extent, influence the direction of the community. Using network analysis we show that some software firms sponsor individuals to act strategically within a free and open source software (FOSS) community. Firm sponsored individuals interact with more individuals than interact with them, and also they seek to interact with central individuals in the community. However, we can see differences in how individuals interact, depending on whether their affiliation is with a dedicated FOSS firm or an incumbent in the software industry. Apparently, some firm managers believe they need 'a man on the inside' to be able to gain access to communities.

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### 1. Introduction

The original aim of Teece's (1986) paper was to explain why some firms fail to appropriate returns from innovation while others succeed. Teece uses three conceptual building blocks: the appropriability regime, complementary assets, and the dominant design paradigm. We maintain that these building blocks are central to the analysis of innovation in the 21st century. However, over the years increased globalization and the information and communication technology (ICT) revolution has

changed how managers need to think about these concepts. We will make use of two of these concepts: the appropriability regime and complementary assets.

The developments over the last two decades provide for simultaneous connect and disconnect between firms, bringing about new ways for firms to organize and appropriate from innovation. In this paper we explain how the introduction of new ICTs can change the organization of innovation in the software industry through the use of free and open source software (FOSS). FOSS is an extreme case of open innovation (Chesbrough, 2003), developed by geographically dispersed communities that consist of individuals who typically receive no financial compensation. Although FOSS can be used as inputs in embedded devices to develop various kinds of products (Henkel, 2006), it can also be used to develop new soft-

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