

Software Patents and Patents Network

JIAMING JIANG

Graduate School of Humanities and Social Science, Okayama University

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Abstract

We utilized the information of joint application for software patent to build a co-invention network and use two kinds of indexes, i.e., “betweenness centrality” and “brokerage roles”, to measure the positions of firms in the network. We also used regression analysis to employ patent citations as a dependent variable to represent the knowledge flows or knowledge transfers, and investigated the relationship between the indexes and patent citations. Our results reveal that inventors who serve as interfaces or links between different firms show a higher patent output and citation frequency, and that firms that are positioned as information brokers between clusters with different information backgrounds benefit from information flows and that has a positive influence on their quantitative and qualitative output.

Keywords: software patents, social network, betweenness centrality, brokerage roles, joint application, patent citation.

JEL classification: L86, O30, Z13