

A Quantitative Study of the Evolution of Open Source Software Communities

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Abstract : Typically, virtual communities exhibit the well-known phenomenon of participation inequality, which means that only a small percentage of users is responsible of the majority of contributions. However, the sustainability of the community requires that the group of active users must be continuously nurtured with new users that gain expertise through a participation process. This paper analyzes the time evolution of Open Source Software (OSS) communities, considering users that join/abandon the community over time and several topological properties of the network when modeled as a social network. More specifically, the paper analyzes the role of those users rejoining the community and their influence in the global characteristics of the network.

Keywords : open source communities, social network Analysis, time series, virtual communities

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