Open source programmers' information seeking during software maintenance

ABSTRACT

Problem statement: Several authors have proposed information seeking as an appropriate case study for studying software maintenance and evolution that have provided empirical classifications of information seeking in commercial software evolution settings. Approach: However, there is minimal research in the literature describing the information seeking behavior of Open Source programmers, even though Open Source contexts would seem to exacerbate the information seeking problems to a certain extend; where team members are typically delocalized from each other and they are often forced into asynchronous communication. Results: This study reports on an empirical study that classifies Open-Source programmers' information needs generated through open-coding of questions that appear on developers' mailing lists. Based on the generated Information Seeking Schema (ISS), details of the information sought by programmers on 6 different mailing lists over several years are analyzed and discussed. Conclusion/Recommendations: The result shows several interesting findings that describe the programmers' information needs across the mailing lists. Firstly, there are a similar pattern of information artifact and attribute across all projects. Secondly, majority of the programmers' information seeking concentrated on the systems' implementations. Thirdly, the OS programmers have also shown to be team-oriented and they tended to rely on documentation more than what have previously reported. These results suggest the applicability of the ISS in evaluating OS programmers information seeking.