

Free Software Developers as an Occupational Community: Cooperation and Conflict in Virtual Design

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Free/open source software (F/OSS) development projects are growing rapidly. The SourceForge Web site estimates 600,000+ users increasing by 700 each day and a total of 60,000+ projects with 60 new ones added each day. Thousands of F/OSS development projects have emerged within the past few years creating many globally dispersed virtual communities. Studies are needed to understand how these virtual communities develop software and how the social worlds that surround them influence collaboration. Most researchers to date have concentrated efforts on the quantitative side of F/OSS development using measurements such as developer defect density, core team size, and other variables. More research is needed in understanding F/OSS as a social phenomenon. Popular F/OSS articles make references to the “gift” culture and the “geek” culture when referring to F/OSS developers, but no empirical research has been conducted to study the work culture of a F/OSS community. In my talk, I present findings from a virtual ethnography of the work culture of a free software development community, the GNU Enterprise (GNUe) project whose purpose is to develop a free Enterprise Resource Planning (ERP) system. An organizational culture perspective is used to characterize the virtual work community and to articulate how the beliefs, values, and norms of the GNUe work culture are manifested into work practices. Results from the analysis of three case studies using the grounded theory approach will be presented showing how cultural beliefs and values influence the GNUe contributors in building community, resolving conflict, and facilitating teamwork. In addition, I characterize the field of F/OSS developers as an occupational community with the formation of various subcultures of F/OSS developers in work projects such as GNUe. Implications for F/OSS software developers and managers of F/OSS development projects will be presented. Long-term impacts of the emergent free software business model on F/OSS design and development will be proposed.

Links to papers and a technical report on this research are listed below:

<http://www.ics.uci.edu/~melliott/papers/Elliott-Scacchi-GROUP03.pdf>
<http://www.ics.uci.edu/~melliott/papers/Elliott-Scacchi-BookChapter.pdf>
<http://www.ics.uci.edu/~melliott/reports/UCI-ISR-03-6.pdf>