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OPEN SOURCE AND FREE SOFTWARE

Organizational and Societal Implications

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Abstract: Although there is evidence of wide-spread organizational and societal adoption of open source and free software (OS/FS) products, processes, philosophy and business models, our understanding of OS/FS in the organizational and societal contexts is still quite limited. In this panel, we seek to stimulate an open and productive conversation by articulating the key research questions which have informed, and emerged from, the study of the socio-cultural, legal, ethical and policy issues associated with OS/FS.

1 PANEL BACKGROUND

Briefly stated, the terms “open source software” and “free software” refer to software products distributed under terms that:

- Allow users to use the software for any purpose.
- Allow users to modify the software (this requires that the source code of the product be made freely available to users).
- Allow users to redistribute (give away or sell) the software in modified or unmodified form.
- Do not require that users pay the author(s) of the software a royalty or fee for engaging in the above activities (although fees may be associated with warranties or related services) (Free Software Foundation, 2003; Open Source Initiative, 2003).

More detailed, formal definitions for the terms are maintained by the Free Software Foundation (FSF) and Open Source Initiative (OSI), however these definitions are substantively identical, and with very few exceptions a software product conforming to one definition will also conform to the other. The decision to use one of these terms rather than the other is ideological, rather than functional; the FSF prefers to use of a term that explicitly refers to freedom, while the OSI believes that the dual meaning of the English word “free” (*gratis* or *libertas*) is confusing and prefers the emphasis on the availability and modifiability of source code (Feller and Fitzgerald, 2002). In Europe, interestingly, the French word *Libre* has been widely adopted to unambiguously capture the connotation intended by the FSF.

Part of the reason for this interest, particularly in the business media, has been the impressive market-penetration of key OS/FS products like the GNU/Linux operating system, the Apache HTTP (Web) Server, BIND (an implementation of the Internet Domain Name System), Sendmail (a mail transport agent), etc. However, from a research point-of-view, the principal attraction is that the terms of distribution associated with OS/FS products are disruptive; they enable new modes of software development and use, stimulate the creation of new software business models and challenge much of the conventional wisdom relied upon by both organizational and societal decision makers and policy creators.

Since the term “open source software” was coined in 1998, mainstream interest in the open source and free software (OS/FS) phenomenon has grown considerably, evidenced by wide-spread media coverage, business and investor interest and a substantial research literature. The early research and analysis on OS/FS was disseminated primarily through the conferences and publications of the ACM, IEEE and related bodies and as such had a “hard” technology focus. However, more recently, a rich multi-disciplinary literature has emerged in mainstream information systems (IS) channels such as AMCIS, ICIS, ECIS and IFIP conferences, and journals like *European Journal of Information Systems* and the *Information Systems Journal*. This latter body of work has more explicitly focused on the social, cultural and organizational aspects of OS/FS, and will be used as the basis of this panel-led discussion.

2 PANEL THEMES

Although the emphasis of the session will be on open discussion, the panelists will briefly present the key findings and critical research questions that have emerged from the literature on OS/FS, with particular focus on the following four themes:

- The world view, ethos and practice of OS/FS development communities, and the implications these have for the organizational and societal adoption of OS/FS development models.
- The economic foundations of OS/FS, and the implications these have for the organizational and societal adoption of OS/FS business models.
- The OS/FS roles of the collaborative user-developer and user-trainer, and the implications these have for the organizational and societal adoption of OS/FS products (vis-à-vis technology acceptance, knowledge management, etc.)
- The philosophical foundations of OS/FS as a public good, and the implications these have for regional policy makers, particularly in developing regions.

REFERENCES

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About the Panelists

Dr. Joseph Feller and **Prof. Brian Fitzgerald** are the lead organizers of the Open Source Software Engineering Workshop Series, hosted by the annual *International Conference on Software Engineering*, and have served as guest editors for OS/FS special issues of the *Information Systems Journal*, *IEE Proceedings – Software* and *Systèmes d'Information et Management* (with Frederic Adam, UCC). They are the authors of *Understanding Open Source Software Development* (Addison-Wesley, 2002) and the editors (with Scott Hissam, SEI, and Karim Lakhani, MIT-Sloan) of *Making Sense of the Bazaar: Perspectives on Open Source and Free Software* (O'Reilly, Forthcoming). Their work on OS/FS has been published in a variety of international journals and conference proceedings. Joseph Feller is a College Lecturer in Business Information Systems at the University College Cork, Ireland, and can be contacted at jfeller@afis.ucc.ie. Brian Fitzgerald is Frederick A Krehbiel II Chair in Innovation in Global Business & Technology at University of Limerick, Ireland, and can be contacted at brian.fitzgerald@ul.ie.

Prof. Jan Ljungberg and **Dr. Magnus Bergquist** are doing research on open source from a social and organizational point of view, e.g. incitement structures for cooperation and knowledge sharing. They have published their results in the *Information Systems Journal* and *European Journal of Information Systems*. Jan Ljungberg is a professor at the Department of Informatics at Gothenburg University and research leader of the knowledge management group at Viktoria Institute. He can be reached at janl@viktoria.se. Magnus Bergquist is associate professor in cultural anthropology and a senior faculty member of the Department of Informatics, Gothenburg University. He can be reached at magnus@viktoria.se.