

# Open Source Software: Meeting Challenges and Surviving Success

Open Source Software (OSS) has often been described as a revolution. It is the nature of revolutions that they do not grow old. Either they succeed, and so replace or become a part of the *status quo*, or they fail, and become a footnote. Either way, they don't just hang around.

By many accounts, the OSS revolution has met with considerable success. Many OSS products have captured significant market share, OSS processes have been adopted (at least in part) by a variety of major software companies and in-house IT developers, and OSS as a movement has attracted the attention of the international investment community. In many ways, the most critical challenge facing OSS is no longer achieving acceptance and legitimacy – it is surviving the transformation from a revolution to a part of the mainstream software industry.

Since *Making Sense of the Bazaar* was held at *ICSE 2001*, interest in Open Source Software (OSS) has continued to gain momentum, both in the practitioner and research communities. Last year alone saw the publication of several books and collections of research dealing with both the theory and practice of OSS. While much of the work published to date focuses on the past and present of OSS, the goal of this year's workshop is to look to the future and to discuss both its short and long term sustainability.

This year's workshop is organized around four key themes:

1. *The quality and maintainability of OSS products and tools.* If OSS products are to continue to enjoy market growth, as tools for both end-users and developers, they must meet (and ideally exceed) the quality standards expected of proprietary products. As Clay Shirky put it, "To use Linux without criticizing it is to betray it" [1]. A sober evaluation of the quality and maintainability of OSS products and tools is critical to the future vitality of OSS.
2. *The replicability and portability of the OSS software engineering process.* OSS, like Free Software, has always been seen as a grassroots phenomenon – development in the wild. Thus it is important to address the question "Can OSS be domesticated?" Is OSS doomed to always be an alternative approach to software engineering – or can its strengths become an integrated part of mainstream software development processes?
3. *The stability and sustainability of OSS developer and user communities.* Michael Tiemann, CTO of Red Hat, once said "Money is just the gas, and the engine is the open source development community. And the quality of the people who are in that community determines how much horse-power this movement's going to have" [Quoted in 2]. If OSS is to survive in both its traditional (self-organizing) and current (business-driven) contexts, it is important to understand the mechanisms by which OSS developer and user communities are created and sustained.
4. *The viability and profitability of OSS business models.* Eric S. Raymond described the effects of the 1998 Halloween Documents in a (characteristically) memorable way. He wrote, "Wall

Street, finally, came to us” [3] But what has happened since then? What is the OSS movement doing with the confidence of the business world? What pure-play OSS business models have emerged – and are they viable? What hybrid proprietary-OSS business models have been adopted? What challenges does OSS face in the realms of law and strategy?

The 15 position papers in these proceedings address many of these issues, and bring others to light. As the organizing committee, we are grateful to the authors of these papers, and are confident that their ideas will serve to generate a day of fruitful discussion. A workshop report based on this discussion will appear in late 2002 in *Software Engineering Notes*. An online version of these proceedings is available on the workshop website at <http://opensource.ucc.ie/icse2002>.

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## REFERENCES

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[2] Dougherty, D. and Sims, D. Will Money Spoil Open Source?, *O'Reilly Network*.  
<http://www.oreillynet.com/pub/a/linux/2000/01/31/interview/index.html>.

[3] Raymond, E.S. The Revenge of the Hackers. <http://www.tuxedo.org/~esr/writings/cathedral-bazaar/hacker-revenge/>