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# The Future of FLOSS in CHI Research and Practice

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**Abstract**

In the past 10 years, Free/Libre/Open Source Software (FLOSS) has become a potent enabler in all areas of computing. Despite its rise in importance, the CHI community has been slow to study and partner with the FLOSS community. This workshop will join researchers and practitioners from the CHI and FLOSS communities to establish an agenda for future research and collaboration between the two communities.

**Keywords**

FLOSS, usability, open source, UX

**ACM Classification Keywords**

H5.m. Information interfaces and presentation (e.g., HCI): User interfaces.

**General Terms**

Design, Human Factors.

**Introduction**

Free/Libre/Open Source Software (FLOSS) is software where license permits one to freely install, copy, and modify the software [8]. Examples of FLOSS include the Linux kernel, the KDE desktop, and the GNU Image Manipulation Program (GIMP).

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In the past 10 years, FLOSS has become an important, influential, and vital force in today's society. Businesses, schools, and governments are increasingly adopting FLOSS to keep IT infrastructure costs down [4, 6], while a wide range of commercial products are now built on FLOSS, including Tivo's digital video recorder, Apple's OS X operating system, and the emerging netbook market. FLOSS's freely available source code also enables world-class research in all scientific disciplines, including computer science, the biological sciences, physics, and mathematics. In short, FLOSS is a potent enabler for countless areas of daily life.

Despite the widespread impact of FLOSS on computing, the CHI community has been relatively slow to recognize, study, and partner with this new community. In 2002, a workshop first introduced the CHI community to FLOSS and CHI-related problems in the FLOSS community [5], while two SIGs, one in 2004 [3] and one in 2007 [1], provided explicit venues at CHI to join those interested in these research area. Most recently, a handful of papers focused on the FLOSS community have appeared in the proceedings of CHI 2008 and 2009 [12, 2]. CHI 2009 hosted several FLOSS related venues including an engineering community discussion on user experience in the open source community, another SIG [11] and a design case study [7]. Given the growing desire in the FLOSS community to improve its own usability practices (e.g., [9, 10]) and the increased interest in FLOSS in the CHI community, there is a real need to articulate and catalyze a research agenda that partners these two communities.

### **Workshop Goals and Issues**

This workshop will gather research and practitioners to outline an agenda for future research and collaboration between the FLOSS and CHI communities. While past CHI workshops and SIGs have raised awareness of the FLOSS community, they have not articulated clear paths forward. Accordingly, this workshop will focus on identifying a clear set of research questions and collaboration opportunities. In particular, this workshop will join individuals from the CHI and FLOSS communities to flesh out a research agenda in the following problem areas:

- Research methods for studying the FLOSS community
- Explicating cultures of practice in FLOSS with respect to CHI concerns
- Developing HCI tools and methods catering to the FLOSS community and its unique cultures of practice
- Leveraging the FLOSS community as a test-bed for performing large-scale research with high ecological validity

We briefly explain each problem area.

The FLOSS community is an extremely diverse community, where individual projects range from geographically distributed volunteer-run projects to commercial software companies. Practices in this community also vary greatly, with some projects employing highly transparent development methods, and other projects working behind closed doors. At the

same time, members of the FLOSS community are highly accessible compared to individuals in closed-source software companies. For example, most FLOSS project members' names and email addresses are readily available. However, unlike closed-source companies, there are rarely "gatekeepers" that control access to these individuals. As a consequence, researchers need to exercise greater care in its dealings with the community to avoid overwhelming the community. Given these factors, it is essential to develop a research tool box and guidelines for studying this community that recognizes its diversity and respects its unique features to ensure a fruitful, long-term collaborative relationship.

While the FLOSS community is a rich, diverse community, it is often conceptualized as a homogenous group of like-minded individuals sharing a common body of practices. Given this common misconception, it is vital for the CHI community to more thoroughly study and describe the FLOSS community, particularly through the lenses relevant to the CHI community, such as perceptions of usability, design practices, interface evaluations, etc. In this workshop, we will map out these key areas of study that lie at the intersection of the two communities.

Arguably, the tools and methods developed to support HCI concerns have, for the last 30 years, been driven by commercial concerns – the desire to *sell* computational artifacts, software, and services. This implicit motivating force has not been recognized within the CHI community. Similarly, the corresponding biases inherent in the CHI community's tools and practices have not been identified. However, these biases have significant implications for the FLOSS community as it

adopts usability and user experience tools and practices. Accordingly, there is a need to consider, with fresh eyes, how HCI might be best supported in this community of practice. There is also a real need to explore how the unique features of this community, its software, and software licenses can be leveraged to address user needs in ways not possible in closed source development.

Finally, the FLOSS community is comprised of an enthusiastic bunch of individuals, many of whom are eager to adopt and try new things. The FLOSS community has also produced a wide range of software, including office suites, graphics applications, integrated development environments (IDEs), statistical software packages, and high-end 3D animation packages. This software is mature, stable, feature-rich, and comparable to commercial alternatives. Given this combination of enthusiastic user base and mature software with accompanying source code, there is an opportunity to conduct CHI research within the FLOSS community at scales that are typically only possible within closed-source software companies. More fully utilizing this potential will help push HCI research out of small-scale, convenience testing into much more realistic, ecologically valid environments.

### **Summary of Workshop Goals, Participants**

The workshop will bring together a diverse group of researchers and practitioners from the FLOSS and CHI communities to establish a concrete research agenda for studying the FLOSS community, developing tools and methods for the community, and collaborating to solve shared problems.

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