

Dear Robin Fielder,

With a solid background in groupware and software engineering, I am a Ph.D. candidate at UCI (University of California, Irvine). As a researcher, I've studied different aspects of groupware infrastructures and the challenges involved in their construction and use. In particular, I have focused on the study of the scalability of highly decentralized architectures in the support of large-scale workflow systems (for my Master's in Brazil), and the different flexibility, reusability and usability trade-offs involved in the construction of flexible publish/subscribe infrastructures. As a strong motivator for my research are the problems faced in the design and development of collaborative distributed applications, which include software engineering environments, infrastructures for collaboration and groupware tools in general.

Currently, I have been applying a component-based approach in the development of flexible publish/subscribe infrastructures (a.k.a. notification servers). The goal of my research is not only to create infrastructures that can be extended and customized in support of different application- requirements, but also to understand and analyze the reusability, usability and performance trade-offs involved in the use of this technology. As a product of this research, I designed and implemented YANCEES, a versatile notification server: <http://awareness.ics.uci.edu/~rsilvafi/yancees/>, and a set of principles and guidelines that will be published as the main contributions of my Ph.D. dissertation.

In addition to my dissertation work, YANCEES has been used as the core communication and integration infrastructure in different projects at both UCI and at IBM (where I was an intern in 2004). For example, at UCI, I worked in the development of Impromptu, a peer-to-peer file sharing tool, where YANCEES was used as the central communication bus. The use of event-based architectures in this project, provide the ability to synchronize the views of different peers and support the implementation of different awareness mechanisms, especially security related awareness. In this project, I also developed a thin client application using Java for PocketPC (more details at: <http://www.isr.uci.edu/projects/swirl/>). At IBM (Collaborative User Experience group at Cambridge, MA), YANCEES was used as a notification server in a study that compared the trade-offs of combining synchronous and asynchronous collaboration infrastructures in a blended collaboration service. The results of this research were published in a technical report and as a conference and journal papers, whereas the resulting infrastructure was further developed and integrated in the most current version of Lotus Notes (c.f. <http://www.research.ibm.com/journal/sj/454/geyer.html>) .

I have a strong background in distributed systems design and development, having used CORBA, Java and RMI, publish/subscribe infrastructures, and the mobile agent paradigm in the development of different projects. In particular, my Master's thesis project back in Brazil (A Fully Distributed Architecture for Large Scale Workflow Enactment), and my current work on flexible publish/subscribe infrastructures resulted in many publications as described in my web page: <http://www.ics.uci.edu/~rsilvafi>

I also have experience in database programming and modeling, developed during my undergrad and a commercial software I developed for PETROBRAS, the Brazilian oil company office in Brazil, as well as network administration experience, gained through summer internships in a medium size company in Brazil and currently, at UCI as a UNIX administrator for my research group server.

I am very flexible and willing to learn and/or apply different approaches to solve problems. Interdisciplinary work is one of the characteristics of my research, where I apply a myriad of technologies to address real world problems related to group collaboration.

I highly regard Apple as a company that would provide a broad set of problems and opportunities to apply my experience in the solution of problems that have the potential to impact how people collaborate and share knowledge and information.

Sincerely,

Roberto Silveira Silva Filho
Ph.D. candidate, UC, Irvine.