

# CALL FOR ARTICLES

## Journal of Systems and Software



### Special Issue: Interplay between Usability Evaluation and Software Development

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\* **Submission deadline: June 15, 2009** \*

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Software development is highly challenging. Despite many significant successes, several software development projects fail completely or produce software with serious limitations, including (1) lack of usefulness, i.e. the system does not adequately support the core tasks of the user, (2) unsuitable designs of user interactions and interfaces, (3) lack of productivity gains or even reduced productivity despite heavy investments in information technology.

Broadly speaking, two approaches have been taken to address these limitations. The first approach is to employ evaluation activities in a software development project in order to determine and improve the usability of the software, i.e. the effectiveness, efficiency and satisfaction with which users achieve their goals. To help software developers' work with usability within this approach, more than 20 years of research in Human-Computer Interaction (HCI) has created and compared techniques for evaluating usability. The second approach is based on the significant advances in techniques and methodologies for user interface design that have been achieved in the last decades (e.g., participatory design and user-centered design). However, the Software Engineering (SE) community has recognized that usability does not only affect the design of user interfaces but the software system development as a whole. In particular, efforts are focused on explaining the implications of usability for requirements gathering, software architecture design, and the selection of software components.

The interplay between these two fields, and between the activities they advocate to be undertaken in software development, have been limited. Integrating usability evaluation at relevant points in software development with successful and to-the-point results has proved difficult. Research in SE and HCI has been done mainly independently of each other with no in substantial exchange of results and sparse efforts to combine the techniques of the two approaches. As a result, the state of industry practice is unfortunately still quite immature and even in some cases the basic principles and currently available usability evaluation methods are not understood. On the other hand, some major advances, including new methods and strategies, have recently been made in the SE & HCI fields that might be of interest to practitioners.

Our aim as guest editors of this special issue is to offer *Journal of Systems and Software* readers information that helps them integrating usability evaluation at relevant points in software development.

For that reason, on one hand, papers that cover in a practical way basic evaluation principles that help organizations with possibly weak evaluation approaches to incorporate some of the well known usability evaluation methods and/or strategies will be welcomed, as well as papers that provide some light about the new trends on the interplay between usability evaluation and software development, so more sophisticated organizations could take some advantage of them. According to that aim, some issues that might be of interest to readers are:

- Lessons learned and recommendations on the interplay between usability evaluation and software development
- Empirical studies of usability evaluation methods applied to software development activities
- Comparisons of usability evaluation methods
- Effectiveness of usability evaluation methods on providing feedback to design activities
- Usefulness of software development artifacts as the basis for usability evaluations
- Practical issues about new trends of usability evaluation in software development
- Influence of specific artifacts obtained during software development on usability evaluation techniques selection
- Effectiveness of usability evaluation methods in emerging techniques for user interface design
- Best practices for particular domains (web-based systems, agile projects, model-driven development, small/fast track projects, etc.)

## **SUBMISSIONS OF PAPERS**

All manuscripts and any supplementary material should be submitted via the online submission and peer review systems at <http://ees.elsevier.com/jss>. Follow the submission instructions given on this site. Please select the article type as “Special Issue: Usability in Software Development”. All manuscripts should comply with the journal’s Guide for Authors. Please refer to the following site:

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/505732/authorinstructions](http://www.elsevier.com/wps/find/journaldescription.cws_home/505732/authorinstructions).

The manuscripts submitted for the Special Issue of the Journal of Systems and Software should be significant extensions of the papers presented at the First International Workshop on the Interplay between usability Evaluation and Software Development (I-USED 2008); as far as size is concerned, all workshop papers need to be extended by at least 30 percent. In addition, authors that have not participated in this workshop are also encouraged to submit their papers.

The Journal of Systems and Software seeks to bridge theory and practice. Thus, both theoretical and practical articles are welcome. However, theoretical articles must include some empirical evaluation, practical demonstration, or substantive discussion of the practical application of the proposed idea. All articles selected for publication will be reviewed by at least three reviewers knowledgeable in the topic. For acceptance, at least two reviewers must recommend eventual publication.

## **IMPORTANT DATES**

June 15, 2009:	Submission deadline
September 25, 2009:	Notification of decisions in the first round of reviews
November 6, 2009:	Revision due in the first round of reviews
December 4, 2009:	Revision due in the second round of reviews
December 11, 2009:	Final notification of decisions
March of 2010:	Expected publication date (subject to JSS editorial calendar)

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