

End-User Programming and Blended-User Programming

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INTRODUCTION

End-User Programming has not lived up to expectations: today's computer world is dominated by "fatware" programs with hundreds of features, not simple applications built by the users themselves. Yet a strange convergence is taking place between the roles of programmers and end-users. Professional programmers are now end users of complex IDEs (Integrated Development Environments) similar to tools for non-programmers. On the other end of the scale, end users of major applications are gradually eased into real programming by extensive customization, macro recorders, "wizards", and GUI builders. In between are the informally-trained software professionals we call "blended-user programmers" who configure computers and networks, control industrial machines, and build active Web pages and business applications. Like conventional programmers, they are paid to program full-time, and develop skills in a variety of tools. Like end-users, their knowledge is applied and experimental rather than theoretical. Many started as end users, but moved into these software careers instead of becoming "gurus" or "gardeners" [1] who help other users.

TOPICS

This workshop is designed to investigate two questions:

1. How have modern programming developments changed classical end-user programming?
2. How can our understanding of end-user programming inform the study of blended-user programmers and professional programmers who now share not only similar tools, but some of their mindset?

The workshop will bring together experts in end-user programming and other fields such as the psychology and

sociology of programming, to improve our understanding and formulate a research agenda into this continuum of programming. We expect to investigate questions such as:

- What are useful boundaries of "programming" in an environment of check-box customization and code modification?
- What are appropriate programming abilities for schoolchildren and adults to learn? What requirements are minimized with modern tools?
- What are commonalities and differences between earlier end-user programming and new forms?
- What technical and social interactions develop when "real" programmers with CS degrees work with programmers from informal backgrounds?
- Do certificate courses primarily expand blended-user programmers' repertoire of tinkering, or make them more analytical?

ORGANIZATION

Fifteen participants will be selected based on papers taking a position on issues related to the continuum of programming. At least half the time will be spent in groups of 3-5, each discussing 1 or 2 issues. If the maturity of the results suggests it, publication as a book will be sought, in addition to usual conference reporting.

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