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⟨Programming⟩ '22

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the Art, Science, and Engineering of Programming

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8th Workshop on Programming Experience (PX/22)

Message From the Chairs

Some programming feels fun, other programming feels annoying. Why?

For a while now the study of programming has forced improvements to be described through the Fordist lens of usability and productivity, where the thing that matters is how much software can get built, how quickly.

But along the way, something has gone missing. What makes programmers feel the way they do when they are programming? It is not usually fun to spend an age doing something that could have been done easily, so efficiency and usability still matter, but they are not the end of the story.

Some environments, activities, contexts, languages, infrastructures make programming feel alive, others feel like working in a bureaucracy. This is not purely technologically determined, writing Lisp to do your taxes probably still isn't fun, but it is also not technologically neutral, writing XML to produce performance art is still likely to be <bureaucratic></bureaucratic>.

Whilst we can probably mostly agree about what isn't fun, what is remains more personal and without a space within the academy to describe it.

In its past editions, PX set its focus on questions like: Do programmers create *text* that is transformed into running behavior (the old way), or do they operate on *behavior* directly (*liveness*); are they exploring the *live domain* to understand the true nature of the requirements; are they *like authors creating new worlds*; does *visualization* matter; is the experience *immediate, immersive, vivid and continuous*; do *fluency, literacy, and learning* matter; do they build *tools, meta-tools*; are they creating *languages* to express new concepts quickly and easily; and curiously, is *joy* relevant to the experience?

In PX, we expand its focus to also cover the *experience that programmers have*. What makes it and what breaks it? For whom? What can we build to share the joy of programming with others?

PX/22 was the eighth edition of PX and the third online-version of the workshop: Participants met virtually, authors presented their work in sessions following the Writers' Workshop structure, and everyone engaged in lively discussions.

Our post-workshop proceedings allowed authors to reflect on the feedback they got from both the program committee and the workshop participants and improve their submission.

We would like to thank our program committee, all workshop attendees, and most importantly our authors for their contributions, constructive criticism, hard work, and willingness to share their ideas.

—Luke Church, Richard P. Gabriel, Hidehiko Masuhara, and Robert Hirschfeld

Papers and Presentations

A Live Environment to Improve the Refactoring Experience

by Sara Fernandes, Ademar Aguiar, and André Restivo

An Experiment in Live Collaborative Programming on the Croquet Shared Experience Platform

by Yoshiki Ohshima, Aran Lunzer, Jenn Evans, Vanessa Freudenberg, Brian Upton, and David Smith

Calling Cards: Concrete Visual End-user Programming

by Michael Homer

CodeMap: a Graphical Note-Taking Tool Cooperating with an Integrated Development Environment

by Rikito Taniguchi and Hidehiko Masuhara

Crosscut: Drawing Dynamic Representations

by Szymon Kaliski, Ivan Reese, and Marcel Goethals

Example Mining: Assisting Example Creation to Enhance Code Comprehension

by Eva Krebs, Patrick Rein, and Robert Hirschfeld

let chart = ; let song = ; // Embedding Visual Languages in Code
by Elliot Evans

Programming in an fMRI Scanner: A Report from the Field
by Steven Tanimoto, Rob Thompson, Todd Richards, Cheri Yates, and Virginia Berninger

Toward Understanding Task Complexity in Maintenance-based Studies of Programming Tools
by Patrick Rein, Tom Beckmann, Toni Mattis, and Robert Hirschfeld

Web

<http://programming-experience.org/px22/>
<https://2022.programming-conference.org/home/px-2022/>

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