



16th CONFERENCE ON PATTERN LANGUAGES OF PROGRAMS

August 28th - 30th, 2009, Chicago, IL, USA

Proceedings



Agile2009
Conference

PLOP 2009 is in cooperation with ACM & AGILE

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ACM ISBN: 978-1-60558-873-5

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Welcome to PLoP 2009

Welcome to **PLoP09, the 16th Conference on Pattern Languages of Programs**, a premier event for pattern authors and pattern enthusiasts to gather, discuss and learn more about patterns, pattern writing, pattern reviewing, shepherding, software development, collaboration, and more, much more.

To accomplish this, the conference program offers a rich set of activities that altogether promote a friendly and effective environment to share expertise, and to give and get feedback from fellow authors. The pre-conference activities start Thursday morning at the **BootCamp**, a special session aimed at people new to patterns and/or PLoP, led by Robert Hanmer and Linda Rising.

Writers' Workshops are the primary focus of our time at PLoP and it will be during them that we will discuss and review each other's papers in a very fruitful way. We have four groups of five papers each, which were selected from an initial set of around 40 submissions, and after a considerable period of shepherding. Papers of the **Writing Group** will have in addition the opportunity of being evolved during PLoP with the mentoring of experienced pattern writers.

We are excited to have three **Invited Talks** which will be time to get inspired and energized by the words and thoughts of Dr. Alistair Cockburn as he discusses "**Making use of Context, Side-Effects and Overdose Effects in Larger Collections of Patterns,**" then we hear from Dave West as he speaks on "**Transcendence and Passing Through the Gates,**" followed by Brian Foote and Joseph Yoder as they explore "**Big Balls of Mud: Is This the Best that Agile Can Do?**" But there is more. **Other activities**, such as the '**Birds of a Feather**' (**BoF**), let you informally organize your own session about topics you are interested in, or to attend already organized working sessions. Just announce them or subscribe to them! We also have an Interactive Pattern Story workshop, a discussion of where patterns might be headed in the future (Is it True?), and an opportunity to learn Social Interaction Patterns and help the authors of the forthcoming book on that topic.

After the conference, the papers are strongly encouraged to be further evolved in order to accommodate the suggestions for improvement gathered during the discussions at the conference. A final version of evolved papers will be published in the ACM Digital Library as PLoP 2009 Proceedings.

And last but not least, we have **Games**, a well-established and very important activity at PLoP. Guided by George Platts on Friday, the games will help us all on ice-breaking, to exercise our body and mind, to collaborate better, and to reinforce a community of trust. Some of the games have become 'traditions', while others will be a surprise.

This year PLoP is not in the beautiful scenery of Allerton Park, the original PLoP location, where most conference editions took place. This one is co-located with the Agile conference, in the windy city otherwise known as Chicago, Illinois.

We would like to thank all authors, shepherds, reviewers, and Program Committee members for their time and collaboration with PLoP. Thank you!

All of these words just to say that we wish you an amazing and productive time during PLoP09!

Rebecca Wirfs-Brock

PLoP 2009 Chair

PLoP® 2009 Conference Proceedings

Pattern Languages of Programs (PLoP®) conference is a premier event for pattern authors and pattern enthusiasts to gather, discuss and learn more about patterns and software development.

Preliminary versions of these papers were workshopped at Pattern Languages of Programming (PLoP) '09 August 18th - 30th, 2009, Chicago, IL, USA. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission. Copyright is held by the authors.

PLoP 2009 Conference Description

Pattern Languages of Programs (PLoP) conference is a place for pattern authors to have their pattern languages reviewed by fellow authors. The purpose of PLoP is to promote development of pattern languages on all aspects of software, including design and programming, software architecture, user interface design, domain modeling, and software process. Domain-specific patterns were encouraged for PLoP 2009.

PLoP 2009 was held in Chicago, IL, August 28-30 in conjunction with AGILE 2009.

We invited contributions from practitioners and researchers on:

- Patterns and pattern languages
- Critiques of patterns and pattern languages
- Research on patterns and pattern languages
- Case studies of the use of patterns and pattern languages

PLoP is different from other conferences. It is run in the "writers' workshop" style, as described in [Richard Gabriel's book](#). Before the conference, authors interact with a "shepherd" who helps them improve their paper to make it as ready for PLoP as possible. A program committee reviews the papers for final acceptance after they have gone through the shepherding process. The writers workshops provide more feedback, and so authors

revise their paper again after PLoP. The papers here are the version produced by authors after PLoP, not the ones reviewed at PLoP.

Invited Talks

At the PLoP '09 conference a number of invited speakers spoke on topics pertinent to pattern writing and developing trends in the software community. Following are list of the invited talks, including speaker information and a short synopsis of the talk:

"Making use of Context, Side-Effects and Overdose Effects in Larger Collections of Patterns"

Dr. Alistair Cockburn, Friday, 28, 09:00-10:00

As you collect more and more patterns, they should start to collide. The interesting question is What to do then? The pharmaceutical form of a pattern goes from symptoms and observations, to recommendation, and very significantly, overdose and side effects. These you might think of as "truth-in-advertising" labeling on the advice contained in the pattern; after all, too much of a good thing is no longer a good thing. In this talk, Dr. Cockburn will share what he has been doing with this pattern format in the area of project management, which matches the healthy-body (pharmaceutical) metaphor quite well. Among the dozens of patterns, several conflict. Dr. Cockburn will talk about the tagging of patterns, making use of context to combine or alternate between them.

"Transcendence and Passing Through the Gate"

Dave West, Friday, 28, 17:00-18:00

Christopher Alexander believed that Patterns and Pattern Languages were Gates, gates that practitioner had to "pass through" before they could practice "The Timeless Way." Patterns must be transcended before their true value is realized. This is not as mystical a concept as it first appears. Kent Beck, in his first exposition on eXtreme Programming (XP) also noted that the third stage of agility was transcendence of the official practices (another kind of pattern) of XP. Using agility as an exemplar, this talk will look at transcendence and offer some pointers for "passing through the Gate."

"Big Balls of Mud: Is This the Best that Agile Can Do?"

Brian Foote and Joseph Yoder, Saturday, 29, 13:30-15:00

It was back in '97 that these presenters first opined that, while much attention had been focused on high-level software architectural patterns, what is, in effect, the de-facto standard software architecture had seldom been discussed: the Big Ball of Mud. Somewhat to our astonishment, since then, no one has ever undertaken to dispute this premise. A Ball of Mud is, of course, a haphazardly structured, sprawling, sloppy, duct-tape and bailing wire, spaghetti code jungle. Is agility's utilitarian focus on process rather than design its secret weapon, or its Achilles heel?

Special Sessions

"Social Experience Design Patterns"

Christian Crumlish and Erin Malone, Friday, 28, 10:30-11:30

The Social Design Patterns project began as an effort to document user interface and interaction patterns related to the design of digital social experiences. Many people have contributed to the current taxonomy of patterns (and related principles, anti-patterns, and emergent practices) and a version of the material is due to appear in dead-tree book form around September 28th this year from O'Reilly and Yahoo! Press. The book is called *Designing Social Interfaces*, and the patterns in it are available for reading (and editing!) now on a wiki at <http://designingsocialinterfaces.com/patterns.wiki>.

Interactive Pattern Story Design Workshop

James Siddle, Saturday, 29, 11:00-12:30

Interactive Pattern Stories allow readers to learn from patterns and pattern languages in a fun, engaging way. The idea is simple: combine pattern stories with interactive fiction, such as children's Choose Your Own Adventure books. The result is an interactive design narrative that readers explore to learn design alternatives and differing consequences.

However, there's a problem - complexity. Writing a compelling design story is tricky at the best of times; introducing branches for different design choices requires the writer to consider and coordinate many possible outcomes. As a result, it would seem that only simple interactive pattern stories are feasible. Further, a story with many endings may require significant amounts of overlapping narrative, which can make the stories inaccessible or boring.

"Is that true..." Discussion

Christian Kohls, Sunday, 30, 10:30-11:30

Whether or not patterns can be called scientific methods has filled the beer cellar of Kloster Irsee with heated discussions among "practitioners" and "researchers" during many EuroPloP conferences. The practitioners usually reject a scientific approach to patterns, arguing that good patterns contain "nothing new", but capture existing knowledge. From their point of view, the nature of patterns is a specific and very useful genre for technical documentation. Unsurprisingly, pattern researchers beg to differ. They consider pattern mining as a scientific endeavor. Patterns reveal previously unreported regularities. In this discussion, we try to reconcile both views, by distinguishing patterns that represent scientific progress from patterns that are just another – albeit effective – genre for documentation.

Writer's Workshops

'Architecture & Design' Group

led by Brian Foote

"An Interactive Pattern Story about Remote Object Invocation"

by James Siddle

"How to make your Enterprise Architecture Management endeavor fail!"

by Sabine Buckl, Alexander M. Ernst, Florian Matthes , Christian Schweda

"A Pattern Language for Metadata-based Frameworks"

by Eduardo Guerra , Jerffeson Souza , Clovis Fernandes

"Adaptive Object-Model Builder"

by León Welicki, Joseph W. Yoder, Rebecca Wirfs-Brock

'People' group

led by Linda Rising

"A Pattern Language for Clearing USA Passport and Customs"

by Marco Hernandez, Jeffrey Hutchinson, Robert Zack

"A Pattern Language for Screencasting"

by Nicholas Chen

"Additional Patterns for Fearless Change II"

by Mary Lynn Manns, Linda Rising

"Patterns for Sustainable Development"

by Linda Rising, Karl Rehmer

"Is that true...? - Thoughts on the epistemology of patterns"

by Christian Kohls, Stefanie Panke

'Process' Group

led by Robert Hanmer

"An Analysis Pattern for Invoice Processing"

by Eduardo B. Fernandez, Xiaohong Yuan

"Composing analysis patterns to build complex models: Flight reservation"

by Zhen Jiang, Eduardo B. Fernandez

"Patterns for Consistent Software Documentation"

by Filipe Correia, Hugo Ferreira, Nuno Flores, Ademar Aguiar

'Security' Group
led by Ralph Johnson

"Symmetric Encryption and XML Encryption Patterns"

by Keiko Hashizume , Eduardo B. Fernandez

"Half-Push/Half-Polling"

by Youngsu Son, Jin-Ho Jang, Jemin Jeon, Sangwon Ko,Hyuk-Joon Lee, Jungsun Kim

"A pattern language for service input data provisioning"

by Geert Monsieur, Monique Snoeck, Wilfried Lemahieu

"Modeling User Interactions for (Fun and) Profit: Preventing Request Forgery Attacks on Web Applications"

by Karthick Jayaraman, Grzegorz Lewandowski, Paul G. Talaga, Steve J. Chapin

"Goal-Oriented Security Threat Mitigation Patterns: A Case of Credit Card Theft Mitigation"

by Sam Supakkul, Tom Hill, Ebenezer Akin Oladimeji, Lawrence Chung

Committees

The PLoP Conference would not be a success without the volunteer help of the shepherds and program committee members. The shepherds devote hours of their time to helping authors improve their papers pre-conference. The program committee members help organize the conference, handle requests, and communicate with attendees.

We would like to thank all those who helped make PLoP 2009 a complete success.

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