

Test Automation Patterns

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*Test Automation
Patterns*

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Origin of patterns in software

- 1970s: architect Christopher Alexander describes patterns for buildings (e.g. light from 2 walls)
- 1987: Kent Beck & Ward Cunningham experimented & presented at OOPSLA
- 1994: “Gang of Four” wrote a book applying pattern principles to software design
 - “Design Patterns: elements of reusable object-oriented software”, Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides
- now widely accepted in software development community

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What is a pattern?

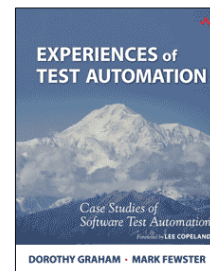
- a generally reusable solution to a commonly occurring problem within a given context
- a description or template for how to solve a problem that can be used in many different situations
- a pattern is NOT
 - a finished solution that can be ‘plugged in’ or transformed directly into code
 - prescriptive
 - a set of steps
- a pattern needs to be implemented within context

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Where did these automation patterns come from?

- Experiences book published 2012
- Seretta Gamba contributed Ch 21
 - Automation through the back door, by supporting manual testing
- Seretta is a developer, used to using patterns
- when she read the other chapters, she thought: “Patterns! Patterns!”
- she wrote up test automation patterns as a book & asked me to join her
- Word didn’t work very well, so we made a wiki



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Introduction to the wiki

- the Test Automation Patterns wiki
 - *ISSUES* – describe problems in automation
 - *PATTERNS* – proven ways to overcome problems
 - other things: acknowledgements, references, some failure patterns
- in this workshop
 - we are using an off-line version of the wiki for demonstration purposes
 - at the end of the workshop I will tell you how you can gain access to the “real” wiki

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Test automation patterns wiki

- purpose: share information, ideas and experiences about test automation, using issues and patterns
- mind-maps summarise issues and patterns (not clickable as links)
- issues and patterns are classified into sub-sections (e.g. management, process, etc.)
- we have some “wiki-rules” and templates if you want to add new ones (to the real wiki)

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Test automation *Issues*: 4 examples

- **HIGH MAINTENANCE COST**
 - Maintenance of the test automation scripts takes a long time and costs more than it's worth.
- **NO PREVIOUS TEST AUTOMATION**
 - Your first time automating, or automation has failed and you are starting again.
- **STALLED AUTOMATION**
 - Automation has been tried, but it never “got off the ground” or has now fallen into disuse.
- **UNREALISTIC EXPECTATIONS**
 - Management has unrealistic expectations about what test automation can & can't do.

Issues (problems)

- what problems affect you in test automation?
 - what causes the most trouble?
 - what takes longer than it should?
 - what is holding you back in your automation?
 - what are you struggling with?
 - what would you most like to improve?

At this point, the workshop will work through issues and patterns in different contexts.

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About these patterns (and the wiki)

- the wiki has a limited set of patterns
 - and a limited “depth” for each pattern
- patterns use other patterns
 - it can get rather complex
- we are focusing on system-level automation rather than unit test automation
 - See Gerard Meszaros’ book “xUnit Test Patterns: Refactoring test code” for unit test patterns
- these are test automation patterns, not test patterns

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Conclusion

- we hope our wiki will help you identify and understand problems (issues) and give you ideas (patterns) for dealing with them
- the wiki is free, by invitation

To be invited, send an email (and your wiki-name if you already have one) to:
info@DorothyGraham.co.uk

To see a preview of the wiki, go to:
www.testautomationpatterns.org