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P R E S E N T A T I O N

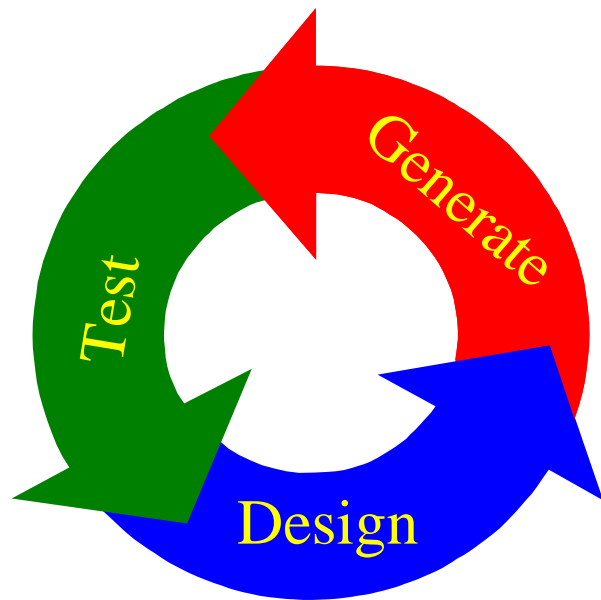
W2

Wednesday, Dec 6, 2000

Design and Replay Exists – and it Works!

Graham Freeburn

Design & Replay exists - and it works!

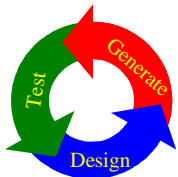


Presented by
Graham Freeburn

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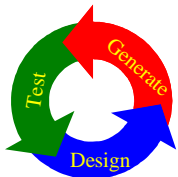
Objectives

- To define 'Design & Replay'
- To tell you about one successful implementation of it called RadSTAR™
 - To suggest how this goes further than other approaches to test automation
 - To explain how this supports and encourages reuse and measurement of testware
- To predict the future of test automation...?



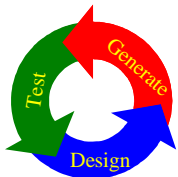
The 'generations' of Automated Testing

- 1st Capture Replay only
- 2nd Scripting, some capture
- 3rd Better scripting + data driven
 - several approaches
 - many built rather than bought
 - some available from consultancy and / or vendor companies



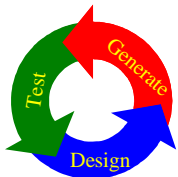
What can we say about these? (1)

- Capture Replay
 - + looks sexy
- Scripting
 - + works
- Built rather than bought
 - + tailored to fit
- Other Advanced approaches
 - + all (generally) more cost effective than the above

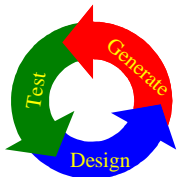
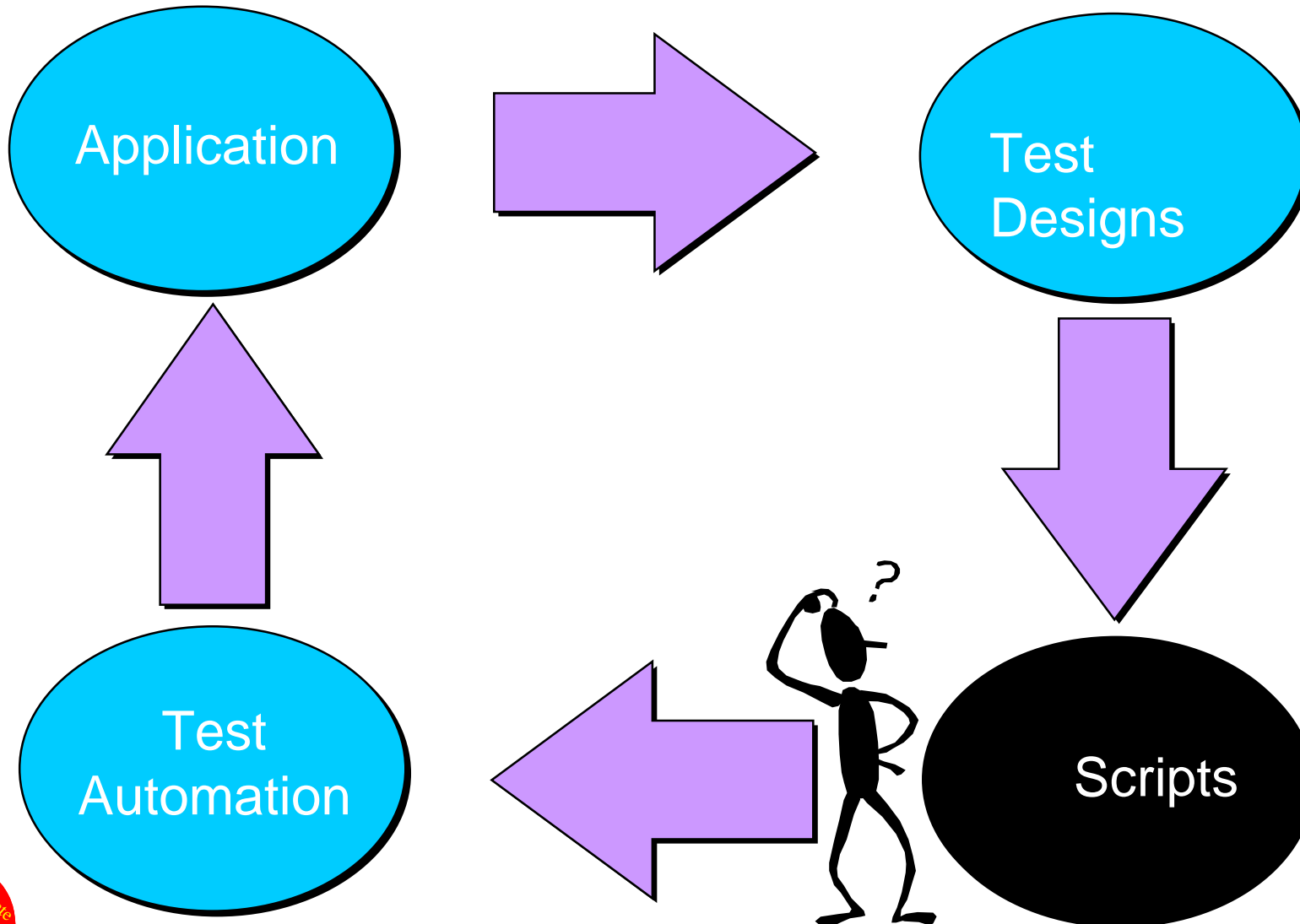


What can we say about these (2)

- Capture Replay
 - it doesn't work
- Scripting
 - requires *good* programmers
- Home grown
 - maintenance overhead, keeping expertise
- Other Advanced approaches
 - don't go far enough

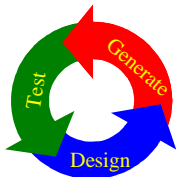


The black hole of test automation...



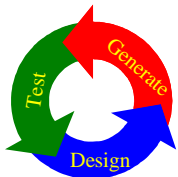
So what is “Design & Replay”?

- Creation and maintenance of test cases by *design*
- Test cases can be used in manual testing
- No capture
- No coding of scripts for ‘test case’ or ‘business function’
 - only for new class / object types and error recovery
- ‘Replay’ only requires mapping to the delivered GUI



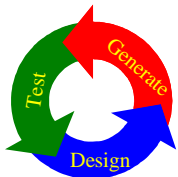
What do you need to use it?

- *Effective manual testing*
- Data driven approach to test case automation
- Design model of the application
- Test execution tool with good support for the class / object types used in your applications
- 'Testing Engine' or framework that interfaces with the test execution tool



The 'generations' of Automated Testing

- **1st** Capture Replay only
- **2nd** Scripting, some capture
- **3rd** Better scripting + data driven
 - several approaches
- **4th** Design & Replay
 - Window based
- **5th** Design & Replay
 - Window and Business Object based



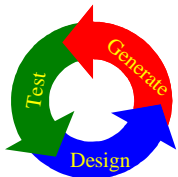
A long time ago...

- Large (U.S.) Telecoms Billing Project, 1994
- Non-technical testers, tight timescales, tools available
- Solution - RadSTAR™ (Mark 1)

.. and guess what? The application software was late!

.. testing not delayed by the need to script / capture
(the tests were already created using RadSTAR™)

- Major enhancements
 - Business Object Scenarios - 1998
 - Spreadsheets replaced by Database - 2000



So what is RadSTAR™...?

Methods / Process

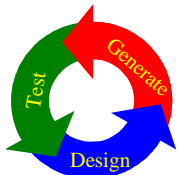
- ‘Triage’ or Critical testing to prioritise test effort, i.e. risk based
- Recommends use of standard techniques for test case design, e.g. EP, BVA, etc.
- Application model and test data held in simple tables
- Supports early development of tests
- Can be integrated easily with existing methods

Technology

- Database to hold test data, expected results and the application model
- Simple VB Front-End
- Software engine consisting of a powerful and flexible ‘framework’
- Integrates with leading test execution & management tools
- Supporting functions are standardised rather than being application specific
- Multi-Platform

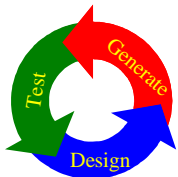


RadSTAR™



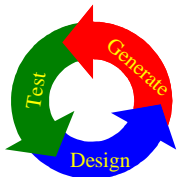
A few other things about RadSTAR™...

- It is **not** a testing tool you can buy
- It is **not** a replacement for test execution or management tools
- It is **not** an answer to all the problems that can cause test automation to fail
 - see 'Top 10 Automation Problems, EuroSTAR99'



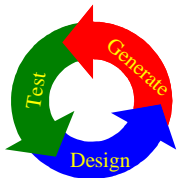
RadSTAR™ Technology - Functions

- Test Design
 - Four tables : Window , Scenarios, Test Case, Test Set
 - can be used for automated or manual testing
- Testware Management
 - model and test data held in a central repository
- Test Execution
 - using your choice of test execution & management tools across range of environments
- Test Documentation
 - Multi-level reporting, Journals, Metrics



RadSTAR™ Technology (1)

TM



Wednesday 6 December 2000

W2

Design and Replay Exists – and it Works!

Graham Freeburn

Since July 1997, Graham Freeburn has been Principal Testing Consultant at ICT providing testing consultancy, support and training to a number of clients. Prior to this Graham was the Testing Process Owner at Scottish Widows where he was instrumental in the development and implementation of wide-ranging improvements to testing to support key business programmes, including Y2000. He was also actively involved in providing testing training and facilitation. From 1987-88 he worked at National Westminster Bank as a Method Support Consultant.

Graham started his career in British Telecom in 1983 quickly moving to their flagship CSS project as Team Leader responsible for co-ordination of all user-testing and live conversion. He has presented at the last two EuroSTAR conferences, Unicom “Test Automation Experiences”, the BCS SIGIST and others. He is also the EuroSTAR country co-ordinator for Scotland. Together with his colleague, Graham Dwyer, he contributed one of the case studies of advanced automation techniques (RadSTAR™) for the recent book Software Test Automation by Dorothy Graham & Mark Fewster.

He holds a First Class Honours degree in Information Systems from Staffordshire University.

