



Met Office

Testing code changes

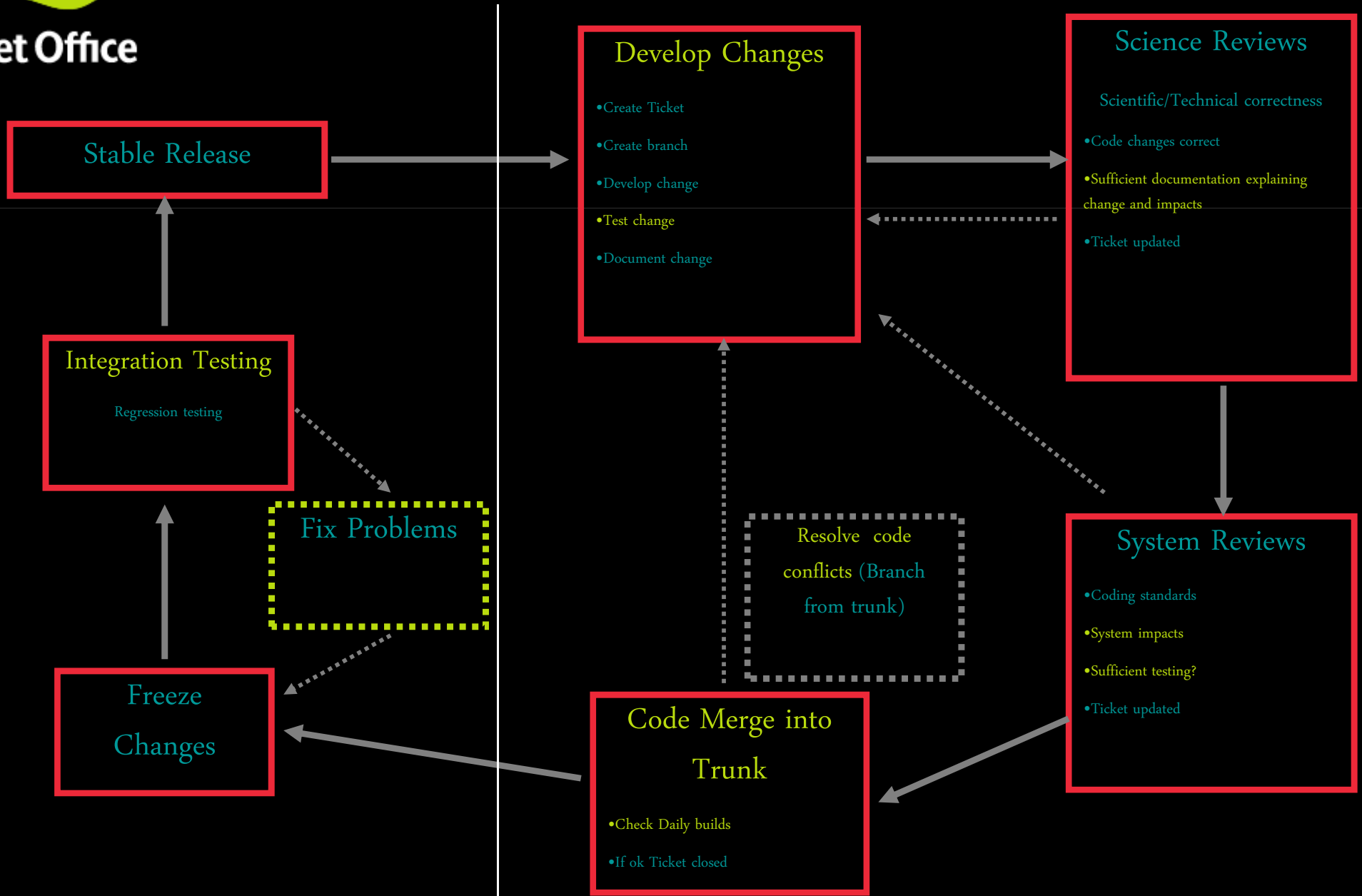
User Test Framework

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UM Release Build Cycle





Aims

- The UTF should enable people developing code for the UM to easily perform a selection of tests specified by the UM System Development Team on their branch prior to submitting it for code/system review
- The UTF should be a more robust and extensible, in terms of both jobs and tests performed on them, replacement for the current Test Harness.

The second point is a specific case of the first



Key Features

- Simplify branch development and testing for users
 - Simple command line tool (branch)
- Improve UM review process
 - Problems fixed before committing to the trunk rather than us having to revert
- Easy to understand output – user friendly
- Text-based configuration files make it easy to extend without learning Perl
 - Easy to add new jobs for user/nightly/weekly/monthly testing
- UTF used by users and test harness



Further Features

- A Job can depend on a number of other Jobs (“Dependencies”)
 - e.g. a “run” Job can depend upon the successful completion of a “build” Job
- Can pass variables between Jobs for later use
 - e.g. the name and path of a built executable
- New “status” objects which indicate “success” or “failure” with a **helpful** message for the user are created by each action done by the UTF



Example UTF run

```
fruw@eld472 ~/example_run - Shell - Konsole
Session Edit View Bookmarks Settings Help
fruw@eld472:~>
fruw@eld472:~>
fruw@eld472:~>
total
lrwxrwxrwx
n7.7/lin
fruw@eld472:~> mkutfdir example_run
fruw@eld472:~>
fruw@eld472:~>
Session Edit View Bookmarks Settings Help
Reading job config files :
N48 Linux UMUI Extract and Build 7.7 read from $jobdir/linux_n48/linux_n48_build.utfjrc
N48 Linux UMUI Model Run 7.7 read from $jobdir/linux_n48/linux_n48_model.utfjrc
N48 Linux UMUI Reconfiguration 7.7 read from $jobdir/linux_n48/linux_n48_rcf.utfjrc
=====
Read 3 jobs from 3 files

Using Br
@ Re

Reading :
N48 Linux
N48 Linux
N48 Linux
Read 3 jo
Updated w

Results :
-----
Succeeded :
N48 Linux UMUI Extract and Build 7.7 has passed
N48 Linux UMUI Reconfiguration 7.7 has passed

Failed :
N48 Linux UMUI Model Run 7.7 has failed (File /data/nwpl/fruw/utf_kgo/n48_linux/dhxca
a_da006 does not compare with /data/local/fruw/_utf/fruwJ63/_utfJa_da006)

===== UTF Complete @ Wed Sep 1 12:05:10 2010 =====
Final status : Task total = 3 : 2 Succeeded, 1 Failed
=====
fruw@eld472:~/example_run>
```



Example Daily tests output

Log Contents					
Page Refreshed	Log File	Run Started	Run Finished		
27/09/2010 08:10:56	utf_logfile	27/09/2010 02:05:13	27/09/2010 02:55:45		
Job	Started	Finished	Message	Result	View
HadGEM Extract and Build HEAD	27/09/2010 02:29:13	27/09/2010 02:29:13	Task 'HadGEM Extract and Build HEAD' has performed as expected	succeeded	
AQUM UMUI Model Run HEAD	27/09/2010 02:48:52	27/09/2010 02:48:52	Task 'AQUM UMUI Model Run HEAD' has performed as expected	succeeded	
NAE UMUI Extract and Build HEAD	27/09/2010 02:32:03	27/09/2010 02:32:03	Task 'NAE UMUI Extract and Build HEAD' has performed as expected	succeeded	
Linux MPD	27/09/2010 02:05:15	27/09/2010 02:05:15	Task 'Linux MPD' has performed as expected	succeeded	
Frames Linux Run : South Africa	27/09/2010 02:08:40	27/09/2010 02:08:40	Task 'Frames Linux Run : South Africa' has performed as expected	succeeded	
AQUM UMUI Extract and Build HEAD	27/09/2010 02:32:23	27/09/2010 02:32:23	Task 'AQUM UMUI Extract and Build HEAD' has performed as expected	succeeded	
N48 Regression Branch Reconfiguration 7.7	27/09/2010 02:20:28	27/09/2010 02:20:28	Task 'N48 Regression Branch Reconfiguration 7.7' has performed as expected	succeeded	
N48 Regression Branch Extract and Build 7.7	27/09/2010 02:18:14	27/09/2010 02:18:14	Task 'N48 Regression Branch Extract and Build 7.7' has performed as expected	succeeded	
N48 UMUI Model Run HEAD	27/09/2010 02:36:18	27/09/2010 02:36:18	Task 'N48 UMUI Model Run HEAD' has performed as expected	succeeded	
Frames Linux Run : New Zealand	27/09/2010 02:08:39	27/09/2010 02:08:39	Task 'Frames Linux Run : New Zealand' has performed as expected	succeeded	
N48 Linux UMUI Reconfiguration HEAD	27/09/2010 02:34:11	27/09/2010 02:34:11	Task 'N48 Linux UMUI Reconfiguration HEAD' has performed as expected	succeeded	
N48 Linux UMUI Extract and Build HEAD	27/09/2010 02:31:50	27/09/2010 02:31:50	Task 'N48 Linux UMUI Extract and Build HEAD' has performed as expected	succeeded	
Frames Linux Build	27/09/2010 02:08:26	27/09/2010 02:08:26	Task 'Frames Linux Build' has performed as expected	succeeded	



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Questions and answers