How to figure out what revision number causes a bug

2012-09 proposal: SVN-Bisect and revision picker on demo.tiki.org (to find/report regressions)

Something worked. And now it doesn't. This is called a regression.

This happens. Most commits fix/improve things, but every once in a while, something breaks. Sometimes, by fixing a bug, we introduce another. Tiki has so many features that it's difficult to test everything. Lots of eyeballs and good bug reporting is essential.

You'd like to report the bug and inform the right person. But how to figure out who introduced the problem and when?

You can use SVN-bisect or the manual procedure below. (Could http://code.google.com/p/phpsvnclient/ be used as well?)

1. You should subscribe to SVN mailing list to be informed of all fixes and to search in your mail client
   - This is a high-volume list so you may want to put a filter to store messages in a directory
2. Get Tiki via SVN (choose your branch)
3. Check your version number.
   
<table>
<thead>
<tr>
<th>svn info</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ svn info</td>
</tr>
<tr>
<td>Path: .</td>
</tr>
<tr>
<td>url: <a href="http://svn.code.sf.net/p/tikiwiki/code/branches/7.x">http://svn.code.sf.net/p/tikiwiki/code/branches/7.x</a></td>
</tr>
<tr>
<td>Repository Root: <a href="http://svn.code.sf.net/p/tikiwiki/code/">http://svn.code.sf.net/p/tikiwiki/code/</a></td>
</tr>
<tr>
<td>Repository UUID: b456876b-0849-0410-b77d-98878d47e9d5</td>
</tr>
<tr>
<td>Revision: 34719</td>
</tr>
<tr>
<td>Node Kind: directory</td>
</tr>
<tr>
<td>Schedule: normal</td>
</tr>
<tr>
<td>Last Changed Author: jonnybradley</td>
</tr>
<tr>
<td>Last Changed Rev: 34716</td>
</tr>
<tr>
<td>Last Changed Date: 2011-05-31 10:42:10 -0700 (Tue, 31 May 2011)</td>
</tr>
</tbody>
</table>

4. Update SVN to a specific revision which you know works.
   To update your source to a specific revision, use:

   Updating to revision 34715
   [demotw@alpha 7x]$ svn update -r 34715
   U  lib/categories/categlib.php
   U  templates/categobjects_title.tpl
   U  templates/categobjects.tpl

   Fetching external item into 'lib/adodb'
   Updated external to revision 34668.

   Fetching external item into 'lib/smarty'
Updated external to revision 34668.

Fetching external item into 'lib/jscalendar'
Updated external to revision 34668.

Fetching external item into 'lib/htmlpurifier'
Updated external to revision 34668.

Fetching external item into 'lib/pclzip'
Updated external to revision 34668.

Fetching external item into 'lib/jquery'

Fetching external item into 'lib/jquery/jquery.s5'
Updated external to revision 41.

Fetching external item into 'lib/jquery/jquery.sheet'

Fetching external item into 'lib/jquery/jquery.sheet/jquery-ui/ui'
Updated external to revision 4075.

Fetching external item into 'lib/jquery/jquery.sheet/jquery-ui/theme'
Updated external to revision 4075.

Updated to revision 405.
Updated to revision 34668.

Fetching external item into 'lib/phpcas'
Updated external to revision 23921.

Fetching external item into 'lib/ezcomponents'
Updated external to revision 34668.

Fetching external item into 'lib/ckeditor'
Updated external to revision 34668.

Fetching external item into 'lib/codemirror'
Updated external to revision 34668.

Fetching external item into 'lib/svg-edit'
Updated external to revision 2034.

Fetching external item into 'lib/mobileesp'
Updated external to revision 34668.

Fetching external item into 'lib/html5shim'
Updated external to revision 34668.

Fetching external item into 'lib/pear/Text'
Updated external to revision 34720.

Fetching external item into 'lib/core/Zend'
Updated external to revision 24101.
5. Clear all caches by visiting tiki-admin_system.php?do=all
6. Test to confirm the bug is not present
7. Update SVN to a specific revision which you know doesn't work.
8. Test to confirm the bug is present
9. Repeat by changing revision number back & forth until you can pinpoint the revision which introduces the issue.

Since you may have quite a few trial and errors, you may want to ignore externals, but an issue can be caused by an external...

svn update --ignore-externals -r 34750

* externals causing regressions should be gradually minimized as we tie our externals to specific stable versions
10. Reply to the message on the SVN mailing list to specify what issue this commit is introducing.

Note: Database structure changes between version, so you may see bugs/error messages because of this. However, most of the time, it won't prevent you to use this method to pinpoint the problematic commit.

SVN-Bisect

How to install SVN-bisect on Ubuntu
$ sudo apt-get install svn-bisect

Tell svn-bisect good, until it gets the right commit number
# sudo svn-bisect start 43700 43800
# svn-bisect bad
# svn-bisect good
# svn-bisect bad
# svn-bisect bad
# svn-bisect good

Ref:

Related
- https://mozilla.github.io/mozregression/
- http://www.selenic.com/mercurial/hg.1.html#bisect
- https://launchpad.net/bzr-bisect
- http://www.monotone.ca/docs/Bisecting.html
• http://www.fossil-scm.org/xfer/help/bisect
• Subversion
• https://quality.mozilla.org/docs/bugzilla/guide-to-triaging-bugs-for-firefox/finding-a-regression-window

alias

• Bisect
• SVN-Bisect
• SVN Bisect