The evolution of the Tclers Wiki

Jos Decoster  -  jos.decosteer@gmail.com

Steve Landers  -  steve@digitalsmarties.com
Origins

- 1999 - second oldest Wiki still going
- wikit - written by Jean-Claude Wippler
- minimal markup
- Web + Tk renderer
- self-contained
- Metakit database
Transitions

- used for embedded documentation
- Metakit to TDBC + SQLite
- embedded web server to Wub
- searching from internal to Google to internal
- added markup
- styling
Issues

- page numbers
- searching
- curation
- spam
- look and feel
- code maintenance
Opportunities

- modern look
- developer support
- 3rd party solutions for web, cache, security, search
- spam mitigation
- curation support
- improved markup
Nikit

- modern look based on Bootstrap
- NGINX load balancing, proxying web server
- Wikit running as an SCGI
- SQLite for database
- CloudFlare for cache, security, acceleration
- Google search
Nikit Architecture

CloudFlare

Bootstrap JS/CSS

NGINX

SCGI

Wikit reader

SCGI

Wikit reader

SCGI

Wikit reader

TDBC SQLite

Linode KVM

Google search
Database

- SQLite3
- schema based on 2007 rewrite by Kevin and Colin
- primary key is now page name (not integer)
- writes serialized via single writer process
- multiple readers
Database conversion

- page name as primary key
- removed empty pages
- old page-ids retained to support existing links
- new pages not created until first edit
## Page stats

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>total number of pages</td>
<td>44385</td>
</tr>
<tr>
<td>text pages with date</td>
<td>13396</td>
</tr>
<tr>
<td>binary pages with date</td>
<td>1634</td>
</tr>
<tr>
<td>pages without date</td>
<td>27442</td>
</tr>
<tr>
<td>text pages without content</td>
<td>1891</td>
</tr>
<tr>
<td>missing</td>
<td>22</td>
</tr>
<tr>
<td>skipped</td>
<td>28</td>
</tr>
</tbody>
</table>
SCGI

• single thread programming
• multiprocessing
• pool of pre-started scripts
• load balancing by nginx
• based on Tcllib’s cgi and http://wiki.tcl.tk/19760
NGINX

- scalable and performant
- easy to configure
- large and growing user base
- lots of info/help available
CloudFlare

• performance
  - distributed cache + CDN
  - content optimization
  - DNS

• security
  - DDoS protection
  - web application firewall
  - SSL + IPV6

• analytics
Styling

- bootstrap based
- responsive layout
- adaptive menu on top
yield

**yield**, a [Tcl Commands|%|built-in] Tcl command, exits the current coroutine without destroying it, returning a value in the process.

Synopsis

```tcl
yield ?value?
```

See Also

**yieldto**

instead of yielding a value directly, execute a command in place of the current coroutine context, which then returns a value.

**tcl::unsupported::yieldm**

an experiment in passing multiple values to a coroutine. **yieldm** turned out to be trivial to implement in terms of **yieldto**.

Description

**yield** arranges for the associated coroutine command of the current coroutine to return **value** if it is provided, or the **empty string** otherwise. The current coroutine context continues to exist. The next time the associated coroutine context command is executed, any argument passed to it becomes the return value of the **yield** that previously exited the coroutine context. If the associated coroutine context command is not given an argument, the return value of **yield** is the **empty string**.

**DKF:** Can also be thought of as a magical form of **return**. That itself returns (possibly).

Example: Basic

```tcl
proc onetwo {} {
  yield [info coroutine]
  yield 1
  return 2
}
```
yield

yield, a Tcl Command\%\%built-in] Tcl command, exits the current coroutine without destroying it, returning a value in the process.

Synopsis

yield ?value?

See Also

yieldto
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tcl:unsupported:yieldm
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yield

yield, a [Tcl Command]

Synopsis

yield ?value?

See Also

yieldto

Instead of yielding a value, yieldto
returns a value.

tcl::unsupported::yield

An experiment in passing multiple values to a coroutine. yielddm turned out to be trivial to implemen-

Example: Basic

Example: 'yield' From Any Command in a Coroutine Context
Changes Page

- last edit per page
- minor edits hidden by default
- minor edit / spam flags
- geo-located region
Minor Edits

- “Save as minor edit” button
- not listed in default Changes page
- listed in page history
Access Rules

• based on roles

• per page

• per area (e.g. admin pages, CSS templates)
Roles

- read
- write (username supplied)
- trusted (authenticated via username / password)
- gnome (edit not shown in default Changes)
- admin
Introspection

- user activity
- page history
- spam
Maintenance

- rename pages
- delete pages (no trace left)
Robot / Spam Detection

- reCAPTCHA
- bayesian filter
- spam hidden by default
- posting prevented from “spammy” IP addresses
- trusted users can mark as spam or ham
Confirm edit for Learn to Program

Last edit 2016-06-17 13:46:03 by pooryorick@108.162.219.144

☐ I'm not a robot

Confirm Cancel

Learn to Program

This page is considered SPAM!
Markup

- full rewrite
- compatible with Wikit markup
- optional
  - HTML
  - Markdown
  - TCL (in safe interp with CPU limit)
Markup

- document types
- special pages
- page templates
- directives
- tables
- special characters
Document Types

<!DOCTYPE WIKIT>  page content written in wikit markup
<!DOCTYPE MARKDOWN>  page content written in markdown
<!DOCTYPE HTMLPART>  page content written in HTML
<!DOCTYPE TCL>  page generated by Tcl script
<!DOCTYPE HTML>  page written in HTML
# Special Pages

<table>
<thead>
<tr>
<th>Special Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMIN:WELCOME</td>
<td>Welcome page, in wikit markup</td>
</tr>
<tr>
<td>ADMIN:MOTD</td>
<td>Message of the day, in HTML</td>
</tr>
<tr>
<td>ADMIN:ACCESSRULES</td>
<td>Access rules</td>
</tr>
<tr>
<td>ADMIN:PRIVACY</td>
<td>Privacy statement</td>
</tr>
</tbody>
</table>
## Page Templates

<table>
<thead>
<tr>
<th>Template</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPLATE:page</td>
<td>Default page template</td>
</tr>
<tr>
<td>TEMPLATE:preview</td>
<td>Page preview template</td>
</tr>
<tr>
<td>TEMPLATE:gsearch</td>
<td>Google custom search template</td>
</tr>
<tr>
<td>TEMPLATE:content</td>
<td>HTML page template</td>
</tr>
<tr>
<td>TEMPLATE:CSS</td>
<td>Nikit specific CSS</td>
</tr>
<tr>
<td>TEMPLATE:JS</td>
<td>Nikit specific JS</td>
</tr>
</tbody>
</table>
Directives

- `<<include:page>>` include another page
- `<<redirect ?reason?>> page` redirect to another page
- `<<motd>>` display message of the day
- `<<changes>>` include 10 most recent changes
- `<<categories>>` page categories
- `<<discussion>>` show/hide part of page
- `<<inlinehtml>>` insert HTML within Wiki markup
- `<<backrefs?:name?>>` include page references for this or specified page
• Include contents of another page in current page

This is Tcl included from [tcl child]

This is HTML include from [html child]

This page is considered <strong>HTML!</strong>
<<redirect ?reason?>> name

- Redirect current page to another page
- Known reasons:
  - redundant
  - duplicate
  - merged
  - inaccurate
- Redirect headers
Tables

- one row per line
  - header \%
  - row \ldots\ldots\text{ or } &\ldots\ldots&

- one field per line
  - start header row \%
  - start row + or |&
  - start field |
Special Characters

<<br>>

<<nbsp>>

<<pipe>>
Cookie Consent

- complies with EU cookie regulations
- shows contents of ADMIN:PRIVACY