Joomla! custom reports using “TinyButStrong”

A “get started” guide: Part 4 – Smarter tables

Summary
Joomla! Administrators familiar with the database and with SQL can use TinyButStrong (TBS) to present information from the database in web pages without needing to create a module or component. Part 1 of this series looked at simple tables and how to format data in the cells. Part 2 addressed security issues in principle and Part 3 demonstrated the principles with a practical example. This article looks at formatting the tables themselves rather than just the data within the cells.

Background
You have already used TBS to produce a report in record time but instead of being grateful to you, your customer/boss/partner/club committee complain that the layout is not what they want. Much as you would like to tell them what they should do with their complaint, you decide to press ahead with delivering yet another miracle.

This article assumes that you have already worked through parts 1 to 3 of this series.

Data source
The data for the report in this article is taken from the tables jos_content, jos_section and jos_categories in the Joomla! database. Columns used in the example are set out in the table below:

<table>
<thead>
<tr>
<th>Column name</th>
<th>Sample content</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>1</td>
<td>primary key for this table</td>
</tr>
<tr>
<td>title</td>
<td>Welcome to Joomla!</td>
<td></td>
</tr>
<tr>
<td>sectionid</td>
<td>1</td>
<td>key for jos_sections table; NULL if uncategorised</td>
</tr>
<tr>
<td>catid</td>
<td>1</td>
<td>key for jos_categories table; NULL if uncategorised</td>
</tr>
<tr>
<td>modified</td>
<td>2008-08-12 10:00:00</td>
<td>date and time last modified</td>
</tr>
<tr>
<td>hits</td>
<td>92</td>
<td>number of times article has been read</td>
</tr>
<tr>
<td>state</td>
<td>1</td>
<td>1: published; 0: unpublished; -1: archived; -2: deleted</td>
</tr>
<tr>
<td>access</td>
<td>0</td>
<td>0: public; 1: registered users; 2: “special”</td>
</tr>
</tbody>
</table>

Table 1: Columns used from jos_content
The columns from table jos_section used in the examples are set out in the table below:
Table 2: Columns used from jos_section

The jos_categories table is similar in structure:

<table>
<thead>
<tr>
<th>Column name</th>
<th>Sample content</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>1</td>
<td>primary key for this table</td>
</tr>
<tr>
<td>title</td>
<td>Newsflash</td>
<td></td>
</tr>
<tr>
<td>published</td>
<td>1</td>
<td>1: published; 0: unpublished</td>
</tr>
<tr>
<td>access</td>
<td>0</td>
<td>0: public; 1: registered users; 2: “special”</td>
</tr>
</tbody>
</table>

Table 3: Columns used from jos_categories

The “access”, “state” and “published” columns contain information that determines if information should be displayed and if so, to whom it should be displayed.

As with the jos_content table, there are other columns that are not used in the examples.

Please note that the sample data has been modified as described in part 3 of this series and summarised in Appendix 2 of this document. If you want to try the examples yourself, you will need to make the changes described. Some of the articles shown in the examples will not appear in the sample data as they are part of this series!

Report 1 – subtitling a table

This report starts from the final report in article 1. The columns have been re-ordered and the “Hits” column has been added:
The output shown above is just a re-arrangement of that shown in illustration 13 of article 1. Note that the PDF icon has been removed from the icon list at the top right as noted in article 1.

By using the TBS “headergrp” feature, it is possible to simplify the display of headers and make changes more obvious.

```
<td colspan="2">[tbs4b.section;block=tr;headergrp=section;ifempty=uncat.]</td>
```

The “headergrp” parameter causes this block to be generated whenever the value of “section” changes. Normally the argument of “headergrp” will the subject of an “ORDER BY” clause in the associated SQL but this is not mandatory. The output from this is shown in Illustration 2.
### Example 2

The report above is now modified using "headergrp=section" to subdivide the report where the value of "section" changes:

<table>
<thead>
<tr>
<th>Section/Category</th>
<th>Article title</th>
<th>Date last changed</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>uncat.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>uncat.</td>
<td>Example Pages and Menu Links</td>
<td>12th Aug 2008</td>
<td>44</td>
</tr>
<tr>
<td>uncat.</td>
<td>Article Information</td>
<td>10th Feb 2011</td>
<td>42</td>
</tr>
<tr>
<td>uncat.</td>
<td>Article Information - smarter tables</td>
<td>31st May 2011</td>
<td>77</td>
</tr>
<tr>
<td>uncat.</td>
<td>TBS sub-blocks</td>
<td>21st Apr 2011</td>
<td>109</td>
</tr>
<tr>
<td>uncat.</td>
<td>TBS security</td>
<td>31st May 2011</td>
<td>28</td>
</tr>
<tr>
<td>About Joomla!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The CMS</td>
<td>Content Layouts</td>
<td>12th Aug 2008</td>
<td>70</td>
</tr>
<tr>
<td>The CMS</td>
<td>Extensions</td>
<td>11th Aug 2008</td>
<td>103</td>
</tr>
<tr>
<td>The CMS</td>
<td>Joomla! Features</td>
<td>8th Aug 2008</td>
<td>59</td>
</tr>
<tr>
<td>The CMS</td>
<td>Joomla! Overview</td>
<td>9th Aug 2008</td>
<td>151</td>
</tr>
<tr>
<td>The CMS</td>
<td>What's New in 1.5?</td>
<td>11th Aug 2008</td>
<td>92</td>
</tr>
<tr>
<td>The Community</td>
<td>The Joomla! Community</td>
<td>12th Aug 2008</td>
<td>52</td>
</tr>
<tr>
<td>The Community</td>
<td>Joomla! Facts</td>
<td>9th Aug 2008</td>
<td>50</td>
</tr>
<tr>
<td>The Project</td>
<td>Platforms and Open Standards</td>
<td>11th Aug 2008</td>
<td>11</td>
</tr>
<tr>
<td>The Project</td>
<td>Joomla! License Guidelines</td>
<td>20th Aug 2003</td>
<td>100</td>
</tr>
<tr>
<td>The Project</td>
<td>Support and Documentation</td>
<td>9th Aug 2008</td>
<td>5</td>
</tr>
<tr>
<td>FAQs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>What are the requirements to run Joomla! 1.5?</td>
<td>11th Aug 2008</td>
<td>25</td>
</tr>
<tr>
<td>General</td>
<td>What is an Uncategorised Article?</td>
<td>11th Aug 2008</td>
<td>5</td>
</tr>
<tr>
<td>General</td>
<td>Is it possible to change A Menu Item’s Type?</td>
<td>10th Aug 2008</td>
<td>15</td>
</tr>
<tr>
<td>General</td>
<td>Why does Joomla! 1.5 use UTF-8 encoding?</td>
<td>5th Aug 2008</td>
<td>29</td>
</tr>
<tr>
<td>General</td>
<td>What is the FTP layer for?</td>
<td>6th Aug 2008</td>
<td>23</td>
</tr>
<tr>
<td>General</td>
<td>Can Joomla! 1.5 operate with PHP Safe Mode On?</td>
<td>6th Aug 2008</td>
<td>8</td>
</tr>
<tr>
<td>General</td>
<td>My MySQL database does not support UTF-8. Do I have a problem?</td>
<td>7th Aug 2008</td>
<td>9</td>
</tr>
<tr>
<td>New to Joomla!</td>
<td>Is it useful to install the sample data?</td>
<td>11th Aug 2008</td>
<td>3</td>
</tr>
<tr>
<td>New to Joomla!</td>
<td>How do I remove an Article?</td>
<td>11th Aug 2008</td>
<td>4</td>
</tr>
<tr>
<td>New to Joomla!</td>
<td>What is the difference between Archiving and Trashing an Article?</td>
<td>11th Aug 2008</td>
<td>5</td>
</tr>
<tr>
<td>News</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latest</td>
<td>Welcome to Joomla!</td>
<td>12th Aug 2008</td>
<td>32</td>
</tr>
<tr>
<td>Latest</td>
<td>We are Volunteers</td>
<td>7th Jul 2007</td>
<td>54</td>
</tr>
</tbody>
</table>

### Illustration 2: Use of "headergrp" on the section field

In this example, it makes sense to highlight changes in category as well as section. This is quite possible as multiple fields may be designated as “headergrp” fields. In Illustration 3 not only are both section and category treated as headers but the data rows are given alternating background colours for older readers hankering back to “pyjama paper”. JCE users can easily give a row background colour by right-clicking in the row then following Row > Row properties > Advanced.
and selecting a background colour.

**Example 3**

By using `headergrp` both for section and for category, the table can be made clearer.

<table>
<thead>
<tr>
<th>Section/Category</th>
<th>Article title</th>
<th>Date last changed</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>uncat.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Example Pages and Menu Links</td>
<td>12th Aug 2008</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Article Information</td>
<td>10th Feb 2011</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Article Information - smarter tables</td>
<td>5th Jun 2011</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>TBS sub-blocks</td>
<td>21st Apr 2011</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>TBS security</td>
<td>31st May 2011</td>
<td>29</td>
</tr>
</tbody>
</table>

**About Joomla!**

<table>
<thead>
<tr>
<th>The CMS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What’s New in 1.5?</td>
<td></td>
<td>11th Aug 2008</td>
<td>92</td>
</tr>
<tr>
<td>Content Layouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extensions</td>
<td></td>
<td>11th Aug 2008</td>
<td>103</td>
</tr>
<tr>
<td>Joomla Features</td>
<td></td>
<td>8th Aug 2008</td>
<td>59</td>
</tr>
<tr>
<td>Joomla Overview</td>
<td></td>
<td>9th Aug 2008</td>
<td>151</td>
</tr>
</tbody>
</table>

| The Community    |                                                   |                   |      |
| Joomla Facts     |                                                   | 9th Aug 2008      | 50   |
| The Joomla! Community |                                             | 12th Aug 2008     | 52   |

| The Project      |                                                   |                   |      |
| Platforms and Open Standards |                                              | 11th Aug 2008     | 11   |
| Joomla License Guidelines |                                               | 20th Aug 2003     | 100  |
| Support and Documentation |                                               | 9th Aug 2008      | 8    |

**FAQs**

| General          |                                                   |                   |      |
| What are the requirements to run Joomla! 1.5? | 11th Aug 2008     | 25   |
| How do I install Joomla! 1.5?                 | 11th Aug 2008     | 5    |
| What is an Uncategorised Article?            | 11th Aug 2008     | 5    |
| Is it possible to change a Menu Item’s Type? | 10th Aug 2008     | 18   |
| Why does Joomla! 1.5 use UTF-8 encoding?      | 5th Aug 2008      | 29   |
| What is the FTP layer for?                   | 9th Aug 2008      | 23   |
| Can Joomla! 1.5 operate with PHP Safe Mode On? | 9th Aug 2008      | 9    |
| My MySQL database does not support UTF-8. Do I have a problem? | 7th Aug 2008   | 9    |

| New to Joomla! |                                                   |                   |      |
| Is it useful to install the sample data?     | 11th Aug 2008     | 3     |
| How do I remove an Article?                  | 11th Aug 2008     | 4     |
| What is the difference between Archiving and Trashing an Article? | 11th Aug 2008 | 5 |

| News |                                                   |                   |      |
| Latest |                                                   | 12th Aug 2008     | 92   |

**Illustration 3:** Clarifying category breaks as well as section breaks
The TBS “footergrp” parameter works much the same but appears at the bottom of a section.

**Report 2 - Summarising data**

The reports presented above will generally be too detailed for more senior readers so the data may have to be summarised. To achieve this, an SQL statement of the form

```sql
GROUP BY sectionid, catid WITH ROLLUP
```

is needed. For further information on “WITH ROLLUP” in SQL, please search the internet. The SQL

```sql
SELECT sec.title AS section, cat.title AS category, sectionid, catid, SUM(hits), AVG(hits), COUNT(*) AS articles FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 GROUP BY sectionid, catid WITH ROLLUP
```

can be used to create a report such as shown in Illustration 4

![Example 4](image)

**Illustration 4: Summarised data**

Unfortunately, non-technical readers will not like numeric values for section and category. Meeting this requirement is not as straightforward as it might seem because in jos_content, NULL values for sectionid and catid mean “Uncategorised” but ROLLUP uses NULL to indicate totals. Another feature of SQL comes to our aid:

```sql
SELECT sec.title AS section, cat.title AS category, (IFNULL(content.sectionid,-1)) AS newsec, (IFNULL(content.catid,-1)) AS newcat, sectionid, catid, SUM(hits), AVG(hits), COUNT(*) AS
```
so new fields newsec and newcat are created with the value -1 where sectionid and catid were originally NULL. These new values can then be used in the TBS template:

```html
<td colspan="2"><strong>Grand total</strong></td>
<td><strong>[tbs4e.SUM(hits);block=tr;when [tbs4e.newsec] = -1]</strong></td>
<td><strong>[tbs4e.AVG(hits);frm='0.0']</strong></td>
<td>[tbs4e.articles]</td>
```

in which the Grand Total row is output only when tbs4e.newsec is -1. The newsec field is never displayed in the table, it is simply used to control the display of other information. The TBS “when” command is very useful for more advanced data presentations. It cannot, however, be used to test for NULL values, hence the SQL “IFNULL” to change a NULL value to -1. The result of this is shown in Illustration 5.

```
<table>
<thead>
<tr>
<th>Section</th>
<th>Category</th>
<th>Total hits</th>
<th>Average hits</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>unc1</td>
<td>unc2</td>
<td>300</td>
<td>61.8</td>
<td>5</td>
</tr>
<tr>
<td>News</td>
<td>Latest</td>
<td>174</td>
<td>34.8</td>
<td>5</td>
</tr>
<tr>
<td>News</td>
<td>Newsflash</td>
<td>11</td>
<td>2.2</td>
<td>5</td>
</tr>
<tr>
<td>News</td>
<td>Section subtotal</td>
<td>165</td>
<td>13.5</td>
<td>10</td>
</tr>
<tr>
<td>FAQs</td>
<td>New to Joomla</td>
<td>12</td>
<td>4.0</td>
<td>3</td>
</tr>
<tr>
<td>FAQs</td>
<td>General</td>
<td>123</td>
<td>15.4</td>
<td>8</td>
</tr>
<tr>
<td>FAQs</td>
<td>Section subtotal</td>
<td>135</td>
<td>12.3</td>
<td>11</td>
</tr>
<tr>
<td>About Joomla</td>
<td>The Project</td>
<td>117</td>
<td>39.0</td>
<td>3</td>
</tr>
<tr>
<td>About Joomla</td>
<td>The Community</td>
<td>475</td>
<td>95.0</td>
<td>5</td>
</tr>
<tr>
<td>About Joomla</td>
<td>The Community</td>
<td>102</td>
<td>51.0</td>
<td>2</td>
</tr>
<tr>
<td>Grand total</td>
<td>Section subtotal</td>
<td>1323</td>
<td>36.8</td>
<td>36</td>
</tr>
</tbody>
</table>
```

Illustration 5: Summarised table with non-geek information

This version combines summarisation with row colouring. A useful feature at the bottom is the date and time of the report. This is produced by the following HTML

```html
<p>End of custom report as at [onshow..now; frm='yyyy-mm-dd hh:nn']</p>
```

and could be handy if you expect the report to be printed.
Conclusions

Joomla! administrators can produce custom reports using TBS that don't just present the information – they can present it helpfully. Even if you are very familiar with PHP, SQL and HTML, it is highly likely that a TBS based approach will save you time and make amending the report an easier job.

Acknowledgement

Thanks to skrol29 for his work in developing TBS.

CheshireCat

31 May 2011
Appendix 1

As before, the scripts can be copied into a script folder while the HTML can be copied into a Joomla! article so that you can try them for yourself. Changes to the database mentioned in the HTML are documented in Appendix 2.

Example 1 – subtitling tables

Version 1

Script

This script is the same as that used for the final example in article 3, except for the change in mergeblock name.

```php
$TBS->MergeBlock('tbs4a','mysql','SELECT content.title, hits, modified, sec.title AS section, cat.title AS category FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 ORDER BY section, category LIMIT 0 , 90');
```

HTML

As in article 1, ifempty=uncat. has been used to replace NULL by “uncat.” in the output of the table.

```
This article is the fourth in a series demonstrating custom reporting from the Joomla! database using the "TinyButStrong" (TBS) plugin. The data used for these reports is mainly in the table jos_content but the tables jos_sections and jos_categories will be used to demonstrate relational data retrieval. Please note that some changes have been made to the tables used. These are noted in part 3 of the series.<p>
</p>{tbs} script=tbs4a.php{/tbs}<p></p>
Example 1</p>

This is the final report from the first article modified to put "Section" and "Category" in the first two columns of the table and adding the "Hits" column:</p>

<table border="1">
  <tbody>
    <tr>
      <td><strong>Section<br /></strong></td>
      <td><strong>Category <br /></strong></td>
    </tr>
  </tbody>
</table>
```
Version 2

Script

The script is unchanged from example 1, except for the mergeblock name.

```php
<?php
  $TBS->MergeBlock('tbs4b','mysql','SELECT content.title, hits, modified, sec.title AS section, cat.title AS category FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 ORDER BY section, category LIMIT 0 , 90');

HTML

Here "headergrp" has been used to alter the rows in which the value of "section" changes.

<p>Example 2</p>
<p>The report above is now modified using "headergrp=section" to subdivide the report where the value of "section" changes:</p>
<table border="1">
  <tbody>
    <tr>
      <td colspan="2"><strong>Section/Category</strong></td>
      <td><strong>Article title</strong></td>
      <td><strong>Date last changed</strong></td>
      <td><strong>Hits</strong></td>
    </tr>
    <tr>
      <td colspan="2">[tbs4b.section;block=tr;headergrp=section;ifempty=uncat.]</td>
      <td>[tbs4a.title;block=tr]</td>
      <td>[tbs4a.modified;frm=dxx mmm yyyy]</td>
      <td>[tbs4a.hits]</td>
    </tr>
  </tbody>
</table>
Version 3

Script
Yet again, the only change is the mergeblock name.

```php
<?php
$TBS->MergeBlock('tbs4c','mysql','SELECT content.title, hits, modified, sec.title AS section, cat.title AS category FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 ORDER BY section, category LIMIT 0 , 90');
?>
```

HTML
Now there are separate rows for changes in section and in category. Fuller use is made of “colspan” to emphasise the headings. There are two rows for the normal data, the first of which has a background colour set. These two rows are used alternately, thus giving a stripy effect that can make it easier to follow the rows.

```html
<p>Example 3</p>
<p>By using headergrp both for section and for category, the table can be made clearer</p>
<p>{tbs} script=tbs4c.php{/tbs}</p>
<table border="1">
    <tbody>
    <tr>
        <td colspan="2"><strong>Section/Category</strong></td>
        <td><strong>Article title</strong></td>
        <td><strong>Date last changed</strong></td>
        <td><strong>Hits</strong></td>
    </tr>
    </tbody>
</table>
```
Example 2 – summarising data

Version 1

Script
This script uses the ROLLUP feature of SQL to create summary rows. The SUM, AVG and COUNT functions are used as might be expected. The “LIMIT 0,90” clause has been removed as it is inappropriate when summarising a full table.

```php
<?php
$TBS->MergeBlock('tbs4d','mysql','SELECT sec.title AS section, cat.title AS category, sectionid, catid, SUM(hits), AVG(hits), COUNT(*) AS articles FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 GROUP BY sectionid, catid WITH ROLLUP');
?>
```
HTML
The SUM and AVG functions may be referenced directly in the TBS template.

Example 4
Summary data
{tbs} script=tbs4d.php{/tbs}
<table border="1">
  <tbody>
    <tr>
      <td><strong>Sectionid</strong></td>
      <td><strong>Catid</strong></td>
      <td><strong>Total Hits</strong></td>
      <td><strong>Average hits</strong></td>
      <td><strong>Articles</strong></td>
    </tr>
    <tr>
      <td>[tbs4d.sectionid;block=tr;ifempty=grandtotal]</td>
      <td>[tbs4d.catid;ifempty=subtotal]</td>
      <td>[tbs4d.SUM(hits)]</td>
      <td>[tbs4d.AVG(hits);frm='0.0']</td>
      <td>[tbs4d.articles]</td>
    </tr>
  </tbody>
</table>

Version 2

Script
The SQL code sets newsec and newcat to -1 if sectionid and catid respectively are NULL. They will be set to NULL by the ROLLUP operator for sub-total and grand-total rows. Neither sectionid nor catid can be -1 as they are defined in the database as unsigned.

<?php
$TBS->MergeBlock('tbs4e','mysql','SELECT sec.title AS section, cat.title AS category, (IFNULL(content.sectionid,-1)) AS newsec, (IFNULL(content.catid,-1)) AS newcat, sectionid, catid, SUM(hits), AVG(hits), COUNT(*) AS articles FROM jos_content AS content LEFT JOIN jos_sections AS sec ON sectionid = sec.id LEFT JOIN jos_categories AS cat ON catid = cat.id WHERE (sec.published=1 OR ISNULL(sec.published)) AND (cat.published=1 OR ISNULL(cat.published)) AND content.state=1 AND (sec.access=0 OR ISNULL(sec.access)) AND (cat.access=0 OR ISNULL(cat.access)) AND content.access=0 GROUP BY sectionid, catid WITH ROLLUP');
?>

HTML
The TBS “when” operator identifies sub-total and Grand total rows. The final line uses the “onshow” operator to display the current time and date.

1 Jul 2011
<p>Example 5</p>
<p>Summary data suitable for non-geeks</p>
<p>{tbs} script=tbs4e.php{/tbs}</p>
<table border="1">
  <tbody>
    <tr>
      <td><strong>Section</strong></td>
      <td><strong>Category</strong></td>
      <td><strong>Total hits</strong></td>
      <td><strong>Average hits</strong></td>
      <td><strong>Articles</strong></td>
    </tr>
    <tr style="background-color: #00bfff;">
      <td colspan="2"><strong>Grand total</strong></td>
      <td><strong>\[tbs4e.SUM(hits);block=tr;when [tbs4e.newsec] = -1\]</strong></td>
      <td><strong>\[tbs4e.AVG(hits);frm='0.0'\]</strong></td>
      <td><strong>[tbs4e.articles]</strong></td>
    </tr>
    <tr style="background-color: #afeeee;">
      <td><em>[tbs4e.section;block=tr;ifempty=uncat.;when [tbs4e.newcat] = -1]</em></td>
      <td><em>Section subtotal</em></td>
      <td><em>[tbs4e.SUM(hits)]</em></td>
      <td><em>[tbs4e.AVG(hits);frm='0.0']</em></td>
      <td>[tbs4e.articles]</td>
    </tr>
    <tr>
      <td>[tbs4e.section;block=tr;ifempty=uncat.;default]"</td>
      <td>[tbs4e.category;ifempty=uncat.]
        <td>[tbs4e.SUM(hits)]</td>
        <td>[tbs4e.AVG(hits);frm='0.0']</td>
        <td>[tbs4e.articles]</td>
      </tr>
  </tbody>
</table>

<p>End of custom report as at \[onshow..now; frm='yyyy-mm-dd hh:nn'\]</p>
Appendix 2

Summary of changes to sample data

These are documented in the third part of this series. As a quick recap:

1. Three new articles have been added in the “New to Joomla!” category of the “FAQs” section. The article entitled “Special access” has access set to “Special”. The articles “Reg only 1” and “Reg only 2” have access set to “Registered”.

2. A copy of the article “TBS sub-blocks” was put into the “New to Joomla!” category of the “FAQs” section and then deleted.

3. The category “Current users” in the “FAQs” section has had access set to “Registered”.

4. The category “Languages” in the “FAQs” section has had access set to “Special”.

5. Some new uncategorised articles have been created as part of the process of writing this series of articles.