

## Background

The Unicode standard defines the Universal Character Set (UCS) which gives numbers to all the characters in all the alphabets of the world. The UCS is a superset of Latin-1 (ISO-8859-1) which again is a superset of ASCII. ASCII defines the first 128 characters and Latin-1 defines another 128 characters and thereby exhausts all bits in a 8-bit byte.

The UCS defines many more characters, so 1 byte per character is not enough. Unicode uses 31 bit, so the logical size of each character would be 4 bytes (32 bit). The problem with those wide characters is that they're only needed if your use of the ~2 billion characters are evenly distributed --- most people use no more than 256 of those characters in their documents, so there's a lot wasted space.

The UTF-8 encoding is a way of transforming 4 byte wide characters into 1-6 byte wide characters. It's backwards compatible with ASCII meaning that texts encoded in ASCII automatically is in UTF-8 as well. Other encodings (including Latin-1) use two or more bytes to represent each character. That's why 'æ', 'ø', and 'å' turns into two-letter combinations when an UTF-8 encoded text is viewed as Latin-1.

All the above is dealt with in much more detail in the [UTF-8 and Unicode FAQ for Unix/Linux](#) which is useful for a lot more than just Unix/Linux.

## If Tiki on your server doesn't look fine:

I've added a line  
`header('Content-Type: text/html; charset=utf-8');`  
in `tiki-setup.php`. This should fix the "browser character encoding decision" problems.  
redflo.

Some servers (like [Apache](#) with the default Debian config) adds a `charset=iso-8859-1` to the Content-Type header. The browser (ex: Mozilla) first looks for a charset value in the Content-Type header and then for META tags, so the header overrides the META tag inserted by TikiWiki.

To solve this with Apache then either check that there is no option `AddDefaultCharset iso-8859-1` in the `httpd.conf` file. Some distributions set `AddDefaultCharset on` in the `httpd.conf` for some security issues (see [Apache Cssi Security](#)), so keep in mind you can always overset default settings in `virtualhost` directive in the `httpd.conf` file.

An other solution is to move the `doc/htaccess` in your Tikiwiki installation to `.htaccess` and uncomment `AddDefaultCharset utf-8` which will add the correct header for UTF-8 output.

## Test on this page itself

(pl) Czy polski ogónki funkcjonujÄ... tutaj, pisany przez mozilli? Np, tu trochÄ™ treÅ&gt;Ä&gt;. (ja) æ—Ÿæœ—èªž. (en) Good, this looks OK ☐.

## Editing the translations

If you change the `language.php` file in Tikiwiki, keep in mind to save the file in UTF-8 encoding. If you're using [Emacs](#) then it's easy to change the encoding of a file. Simply open the file, and then type `'-+C-x RET f+-'` which runs the command `set-buffer-file-coding-system`. Now choose `utf-8` from the list.

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