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Developing the Cornish Dictionary using open source tools and data

Davydh Trethewey

Project Support Assistant, Sodhva Kernewek - Cornish Language Office Konsel Kernow - Cornwall Council davidtreth@gmail.com taklowkernewek.neocities.org

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Previous Online Dictionary

 Standard Written Form of Cornish online dictionary cornishdictionary.org.uk (Internet Archive Wayback Machine)



Features in an ideal online dictionary

- Improve usability on different platforms desktop/tablet/mobile
- Cater for the various users of the language, including users of different varieties of Cornish
- Show personal forms for verbs and prepositions
- Ability to add sound samples
- Disambiguation of translation equivalents

Things to improve

- English to Cornish, and Cornish to English had been separately created in previous version
- Some errors and inconsistencies
- Updates according to 2013 review of the Standard Written Form
- Integration of work done by Terminology Panel of Akademi Kernewek
- Provide platform for further work by Akademi Kernewek

Dictionary data

- Exported from the software used in the previous version as an XML file
- Each word or phrase in the dictionary is a <lemma> tag group
- Various information in sub-tags
- e.g. pronunciation, part of speech, plural, English glosses, example sentence, etymology, attestations in the traditional texts

Tidying the XML

- Use Python Beautiful Soup to analyse the XML
- Allows any errors or inconsistencies to be spotted by looping through the <lemma>s in the dictionary
- Simplify some of the structure, move subentries to their own
- Collaboration with Dewi Bryn Jones (Bangor University) to enable it to be in a format suitable for import into Maes T

Variants within the language

- Cornish as a revived language derives from sources at different time epochs
- Broadly speaking, two time periods of Middle and Late Cornish
- Different groups within the revival have based the revived language primarily on Middle or Late sources
- Orthographic decisions have sometimes made these seem further apart than they really are

Maes T software

- Software that is used for terminology dictionaries in Welsh online at http://termau.cymru
- Developed by Language Technologies Unit, Canolfan Bedwyr, Bangor University [1] [2]
- Deployable via an API to the web or apps [4]
- Maes T has also been used for geiriadur.bangor.ac.uk and www.termiaduraddysg.org where sound samples are also presented

Termau.cymru

filament (astronomy) ffilament eg ffilamentau (seryddiaeth)

Tafod o nwy dwys cymharol oer wedi ei ïoneiddio (~10,000K), yn gaeth mewn bwndeli cymhleth o faes magnetig yn atmosffer isel yr Haul. Mae ffilamentau'n ymddangos yn dywyll yn erbyn cryfder yr Haul y tu ôl iddynt.



A tongue of dense relatively cool ionized gas (-10,000K), held in place by complex bundles of magnetic field in the Sun's low atmosphere. Filaments appear dark against the brightness of the Sun behind them.

Geiriadur Termau'r Coleg Cymraeg Cenedlaethol - Mathemateg a Ffiseg

termau.cymru/#filament [3]

Adapting Maes T to better serve Cornish

- Collaboration with Dewi Bryn Jones to adapt the Maes T software for Cornish
- Some relevant grammatical differences between Welsh and Cornish
- Other changes come from using it for a general dictionary website rather than terminology dictionaries that usually have a 1:1 correspondence between Welsh-English in a given context

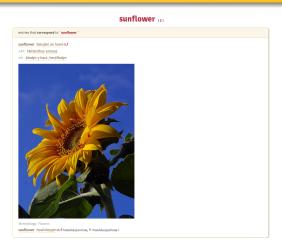
Transition to editing within Maes T

- Once the structure is stable, move away from manually editing XML to editing within Maes T
- More practical for a wider range of people e.g. Dictionary Panel members of the Akademi Kernewek to edit
- Manually editing an XML file can be error prone, which was mitigated by the Python scripts validating / analysing it

Terminology Panel

- Akademi Kernewek, the Cornish language academy has a terminology panel to research new terms for the language
- A number of subject areas have been considered so far: plants, insects, mining, minerals, architecture, grammar

Using open source data from Wikimedia



www.cornishdictionary.org.uk/#sunflower

New dictionary website

Demonstrate the new dictionary website (demo of cornishdictionary.org.uk)

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Conclusions and future ideas

- We already have some example sentences, but could have many more of these, and audio of them by speakers
- Method of handling Middle and Late variants allows multiple variants to be supported while keeping them semantically as one <lemma> item

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