Language Technologies Unit
Bangor University
langtech.bangor.ac.uk
Empowering all speech communities

Our mission

Speakers of small and less-resourced languages are in danger of being left behind by the Digital Age. On the other hand, digital technologies can help smaller languages, allowing speakers to communicate more easily, and providing them with new and improved resources.

We aim to develop these technologies, primarily for Welsh, but always in a multilingual, sharing context. Through this we also aim to help with economic regeneration, especially for businesses in the ICT and creative media sectors who can incorporate language technologies in their products and services.

What technologies are important?

Spelling and grammar checkers, electronic dictionaries, and translation aids are basic tools important for the public and developers alike. Speech technology is becoming increasingly important as more and more devices are speech enabled.

We've recently started researching command and control systems for Welsh and on http://techiaith.cymru/category/lleferydd/ you'll find a demo of three simple robotic arms run from a Raspberry Pi responding to spoken commands in Welsh.

We've managed to fit a Rasperry Pi inside the head of a Rapiro robot and used it teach coding skills to kids in school using our Welsh language tools and resources –great for teaching literacy and numeracy skills in Welsh as well!
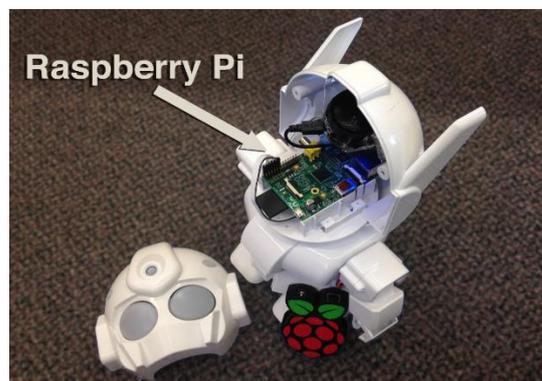
Our open source philosophy

Markets in smaller language communities aren't as economically attractive to large companies as big ones, but we believe that's a mistake on their part: the 'long tail' of smaller languages, added together, have more spending power than any single major language in the world. However, if they're unwilling to invest in technology for these languages, we're happy to help them – for the sake of the language communities, and a balanced approach to innovation and economic benefit for living communities.

By releasing our tools and resources on BSD style open licences we enable everyone – enthusiasts, activists, developers, SMEs, global organisations – to use our software in their products. Check out our Welsh National Technology Portal to access some of this stuff: http://techiaith.cymru/

Crowdsourcing roles

Some of the new technologies are very data-hungry, and getting things like large corpora can be difficult for small languages. We recently developed a 'Paldaruo' (Welsh for 'chatter') app for iOS and Android. This enables contributors to record their own voices reading out a prepared script which is then uploaded automatically to our servers and used to build speech recognition tools.
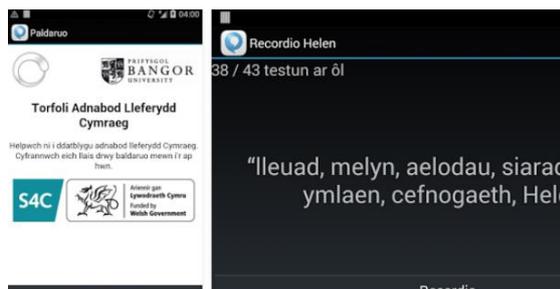
The Ap Geiriaduron dictionaries app

Every language should have one of these. The dictionaries are also available in other modalities, but it's the free, downloadable app version that has caught the public's imagination. There have been more than 46,000 downloads and 60,000 updates do far. It's bilingual English/Welsh, and a great help to translate between the two languages. Get

yours from the Apple, Google or Amazon app stores today.

Speech Technology Report for the Welsh Government

We don't get to spend all our time playing with new software and apps. Sometimes we're asked to write technical reports and papers, and we've just published on which might be of interest to other language communities as well.
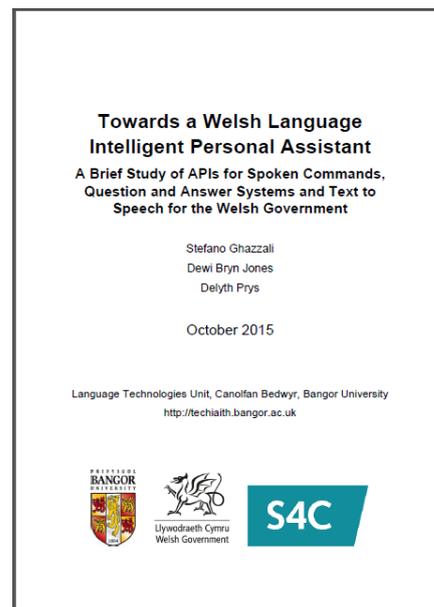
You can find it on our website at http://techiaith.bangor.ac.uk/towards-a-welsh-language-intelligent-personal-assistant/?lang=en

Who are we?

The Language Technologies Unit is a self-funded Research unit within Canolfan Bedwyr, Bangor University, Bangor, Wales.