Kantan Jisho
A Modern, Lightweight Japanese-English Dictionary

David Noetzel

Introduction
My project is Kantan Jisho, a modern Japanese-English dictionary free of feature creep, which pairs a simple, straightforward interface with fast, powerful searching. Most other freely available Japanese-English dictionaries have cluttered interfaces (see: zkanji) and are full of features that are rarely used or done better by other programs (see: Tagaini Jisho). Some use static dictionaries, which leads to their content becoming less and less relevant as both languages evolve over time. Furthermore, many of these programs are only available for a single platform and their source code is proprietary, limiting the freedom of their users to share and modify the software.

Motivation
The desire to build a better dictionary arose when I was to study abroad in the summer of 2013. The program warned applicants that given the large proportion of elderly host parents, internet access was not guaranteed at home, meaning I would be deprived of my favorite online dictionary. I was reminded of the need for offline resources for language learners. Though its availability grows with every passing day, internet access is by no means a given in every situation; having options that do not require an internet connection remain valuable. As mentioned previously, the current crop of Japanese dictionaries are slow, outdated, bloated or available only for one platform; I believe that a better option can and should exist, and this project will make that a reality.

Features
- Cross-platform framework
  Kantan Jisho will be written in C++ using the Qt framework, ensuring that users of Windows, OS X and GNU/Linux distributions will all be able to have the same experience, but with a native look and feel.
- Simple interface
  The UI will eliminate visual clutter, allowing you to see only what you need to see.
- Constantly updated multilingual base dictionary
  JMdict (Japanese-Multilingual Dictionary) is an ever-evolving dictionary which has been updated continuously for over 15 years. While the original focus was on English translations for Japanese words, support for various other languages has been added. The sources used in Kantan Jisho will be kept up-to-date with an auto-update mechanism that will run on a user-defined interval.
- Ability to handle multiple inputs
  Unlike characters in Western alphabets, Japanese has three distinct writing systems: kanji, Chinese characters which are complex ideograms and number in the thousands;
hiragana, a syllabary primarily used for conjugation, inflection, postpositions, and words for which no kanji exists; and katakana, a syllabary primarily used for loanwords, emphasis and onomatopoeia. In addition to these native writing systems, Japanese is sometimes rendered in Latin characters called romaji. There are multiple standards for Romanization, so to be effective, a dictionary should be able to parse all of them. Kantan Jisho will allow for searching using any input method.

- Wildcard searching
  Learning kanji is often the most challenging hurdle for speakers of Japanese, native and non-native alike. Looking up an unknown kanji can be time-consuming, but there are situations in which the reader recognizes some of the characters in a word. Wildcard searches can use this partial knowledge to find a match. ? represents a single character and * represents any number of characters. For example, if a user saw the word 電話 (denwa; telephone) but did not know the character 電, he could perform the search “?話” to find 世話, 秘話, 談話 and 電話, along with many others. From these filtered results, the correct word can be easily identified in less time than it would take to look up the unknown character.

- Tabbed searching
  When deciphering a sentence with many unknown words, it is key to be able to have many queries at the ready. Just as tabs in web browsers prove incredibly useful in looking at multiple pages, so too is the ability to switch between multiple queries in a dictionary.

- Additional specialized dictionaries
  For specialized areas not covered by the base dictionary, like computer jargon, engineering terms and names, there are expanded dictionaries, though only with English translations.

- Search history
  A complete history allows you to look through all of your queries to find words that you may have forgotten.

- Advanced search filters
  Though Kantan Jisho is designed to be simple, the user should be in complete control of his search. Extensive options - such as those that make searches return only commonly-used words or that filter out loanwords - will allow a more advanced user to search for exactly the word he wants to find.

- GPLv3 license
  A free software license gives anyone the ability to freely share, fork and modify Kantan Jisho as they please.

**Deliverables**
- Basic interface: 2/19
- Word searching: 2/26
- Kanji and sentence searching: 3/5
- Tabbed searching and history: 3/19
- Dictionary updating: 3/26
Conclusion
Kantan Jisho is a modern take on an invaluable piece of software essential for learners of any language, especially one with as many unique challenges as Japanese. Kantan Jisho will distinguish itself by its simple interface, straightforward nature and frequently updated corpus.