

## **Bridget ALMAS**

### *Alpheios Reading and Annotation Tools*

The mission of the Alpheios Project is to build evidence-based open-source software to support the worldwide study of classical languages and literatures. To fulfill this mission, Alpheios provides a variety of tools to support both reading and annotation of Latin and Ancient Greek texts. The functionality we make available relies heavily upon open source tools, digitized texts and databases that have been developed over decades by the classics research community. Alpheios hopes to continue to support this community by being an active participant in a virtuous circle of resource production and reuse.

The Alpheios Reading Environment includes Browser Extensions that enhance any text viewable in the browser by adding clickable access to dictionary entries, morphological analyses, inflection tables and grammars for any Latin or Ancient Greek word. This same functionality is also available as an embeddable Javascript library that can be used by text providers to enable Alpheios functionality to be embedded directly in their pages without requiring users to install an Alpheios browser extension. We embed this library in the texts we publish on the Alpheios site to provide a streamlined reading experience across the desktop and mobile devices.

For texts that have aligned linguistic annotations, such as treebanks and word-aligned translations, the Alpheios tools can display those annotations as additional reading aids for the user. To facilitate the creation of such annotations, Alpheios provides tools such as the Translation Alignment Editor and the Arethusa Treebank Editor (which is being co-maintained by Alpheios and The Perseids Project).

The dictionary definitions, morphological analyses, annotation data, and other resources that Alpheios provides are retrieved from webservices that aggregate access to open source resources under common APIs. These services are already able to take advantage of linked open data to enhance the resources they proxy access to, and we are eager to add new resources as they become available. For example, integration of data from wordnets, gazetteers and corpus-based wordlists are a few of the items on our list of desiderata for future features. The LiLa linked open knowledge base of interoperable linguistic resources and NLP tools for Latin would be an ideal resource for enhancing the Alpheios reading environment and increasing the utility and interoperability of the data produced by the annotation tools.