

Languages for E-Commerce

A project by the Arbeitsbereich Linguistik in cooperation with European partners

The Arbeitsbereich Linguistik, in cooperation with a number of partners in the European Union, is working on a toolset that makes learning about all aspects of e-commerce very easy. Our main task is to provide other partners with a multilingual dictionary and an ontology that both can be integrated into courses on e-commerce.

The dictionary is currently available in English, German and Spanish. All languages will eventually include about 1000 entries from areas such as commerce, trade, business, internet, technology and law.

The Dictionary

The ABL has access to a huge set of language resources. These, combined with expertise from professional linguists, teachers and computer scientists, allowed to create the base of the dictionary. It features not only definitions for over 1000 entries per language but also grammatical information, common usage and synonyms to support easy exploration of the whole e-commerce domain.

The Dictionary Editor

Due to the international character of the project, an Internet-based collaboration tool for creating multilingual dictionaries was needed. While working on the English and German versions, we created a tool that allowed our Spanish partners to work on their part within our workflow. Only a modern web browser is needed to work with the Dictionary Editor; its Internet-based nature allows worldwide access at any time. It supports XML-based data exchange for industry-standard integration with other systems. The Dictionary Editor proved so popular among our partners that Finnish and Latvian versions have joined the three base languages.

The Dictionary Editor

The Ontology

To support working with the dictionary and exploring language and e-commerce an ontology was created. The ontology links dictionary entries in a way that goes beyond the common "see also" known from traditional dictionaries. The ontology defines additional relations between entries, such as *is-a*, *uses*, *part-of*, *has-part* among others. With this set of relations it is possible to infer information from the dictionary without explicitly stating it (which would be an immense task and thus practically not manageable).

For example, the ontology defines that a shop has some kind of *means of payment*, a *webshop* automatically inherits this attribute. Now a *means of payment* is a higher class of, for example, *electronic payment*. This is all stated explicitly. Using the ontology, it is now possible to infer knowledge by seeing that a webshop differentiates itself from a real-world shop by being electronic; as such, the *means of payment* must be electronic as well, so *electronic payment* is linked to *webshop* without ever stating that relation explicitly. With this, the ontology allows to explore the e-commerce domain much easier and more natural than it would be possible without.

