This work starts with the idea of The Semantic Web. Then basic description logics is introduced with its parallel in a couple of formalisms for building of ontology. In this work, there is shown, how the ontologies are employed in the semantic annotation process and also there are described some projects that use semantic annotation in a practical way. Information extraction methods that help to automatize the semantic annotation process are mentioned. Tools for natural language processing of Czech language are described in detail. A practical experiment shows how these tools can help with extraction of information from plain text. This work also deals with the relationship of natural language processing and formal representation of knowledge in description logics.