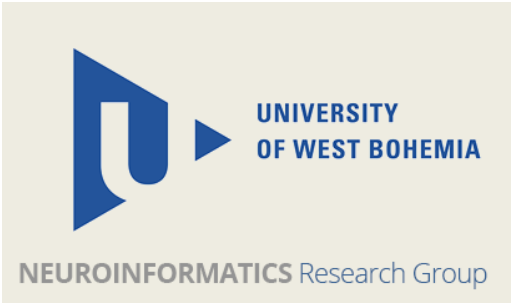
Semantic Framework in EEG/ERP Portal



JEŽEK, P., MOU?EK, R. *Semantic Framework in EEG/ERP Portal*. Mnichov, 2012.

Since a collection of obtained data/metadata from EEG/ERP experiments gradually grows we had to solve their long term storage and management. As a solution we developed the EEG/ERP Portal as a core of a complete software infrastructure supporting EEG/ERP research. Since we are working on the registration of the EEG/ERP Portal as a recognizable data source within NIF we provide the stored experiments in the form of the Semantic Web structures. Since the EEG/ERP Portal is a Java-based application with the data layer using common JavaBeans we are simultaneously developing the Semantic Framework that transforms input JavaBeans into the Semantic Web languages. The Semantic Framework is being developed as a single library. It is used as a black box with the input in the form of a set of JavaBeans and the output in the form of an ontology document. The ontology document can be serialized into several supported syntaxes. We currently support RDF/XML, OWL/XML, Turtle, and abbreviated OWL/XML formats. Because of semantic gaps between object-oriented and Semantic Web models we proposed and implemented an extension of common JavaBean using Java Annotations.

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