Kurzfassung der Studienarbeit

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Titel der Studienarbeit	**db4o2D**
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db4o is an object oriented database which provides an easy way to persistently store Java and .NET objects. The goal of this semester thesis is to introduce geospatial attribute types to the db4o database. Whit this add-on it is easy to use db4o in location based systems and services. The geospatial data types are provided by the Java Topology Suite (JTS) library. This library defines the geospatial types and functions based on the "Simple Feature Specification" which was developed by the Open Geospatial Consortium. For the implementation of these attribute types the adapter design pattern – or wrapper pattern – was chosen. The wrappers encapsulate a native JTS object and are passing the method calls to the given native JTS object. This provides the ability to instantiate geospatial objects out of the db4o namespace and it's currently done straight forward up to a future version which will handle each geospatial type as an indexed attribute type on its own.

Unfortunately the marshalling interface and library (newly called TypeHandler4), is currently under refactoring and is not finished until the end of this project. Because of that, we have accomplished some alternative goals:

- The first alternative goal is to provide a good base of information for a subsequent semester thesis. In this future thesis, an own marshalling and indexing will be implemented. This base includes a good documentation of the geospatial types as well as unit tests.

- The second goal is to evaluate an index for geospatial objects based on defined requirements.

For more information about this semester thesis visit the project space of db4o2D under the following weblink: http://projects.db4o.com/Db4o2D