

Abstract

English

An increasing number of web applications is developed for the research in life sciences. These web applications which support the researcher in management and analysis of data often contain parts which can be found in other web applications in a similar form. To save time and development effort, existing components of other web applications could be reused when a new application is developed. A module which is used for the composition of a new application should consist of the business logic, the database table definitions and the web interface.

The goal of the thesis is to assess the feasibility of this component-based approach in relation to the technologies which are used at the Institute for Genomics and Bioinformatics e.g. AndroMDA, Struts, J2EE, Spring, Hibernate and Tapestry.

The Emersion platform based on the Java Plugin Framework (JPF) provides a simple mechanism for the integration of components into a web application system. Therefore it was chosen as the technology for building component-based web applications. The platform had to be modified so that it could be integrated into the JBoss Application Server. Then it was tested whether small applications using the institute's technologies could be composed to a larger web application with the help of the modified Emersion platform.

Keywords: Component-based Software Development, JPF, Emersion