

The component-based and service-oriented development have become commonly used techniques for building high quality, evolvable, large systems in a timely and affordable manner. In this setting, interoperability is one the essential issues, since it enables the composition of heterogeneous components and services. The aim of the thesis is to analyze possibilities of interoperability between the SOFA2 component system and the OSGi Service Platform, and based on that propose and implement a solution for mutual collaboration.

The actual integration is based on the use of aspects and annotations. The issues connected with the runtime service management (e.g. binding/unbinding services) are handled by the control part of components using the aspects. While, the annotations serve for specifying service-enabled SOFA2 components in a declarative way. The OSGi support is incorporated in both the SOFA2 runtime environment and the tool for developing SOFA2 components. Furthermore, the outlined approach is general and can be easily reused for integrating other SOA-based systems as well.