Component systems allow to build large scale applications from reusable components. However, many of the contemporary component systems have an extensive component development cycle with a long turnaround time. To speed up the component development, the dynamic languages, which allow to change the implementation at runtime without compilation and restarting, could be used. Therefore,
the support of components implemented in dynamic languages could simplify development of application prototypes and add other advantages of interpreted dynamic languages (dynamic typing etc.). The aim of this thesis is to extend the SOFA 2 component system runtime to support primitive components implemented in dynamic languages. The extension is based on the SOFA 2 component aspect mechanism and it focuses on minimal changes of the existing core runtime implementation. The presented implementation also provides
tools for interaction with running scripted components in order to allow dynamic implementation changes. On the basis of this extension, the thesis evaluates potential of the SOFA 2 microcomponent-based controller part for building runtime extensions, particularly extensions integrating new runtime technologies such as dynamic languages.