Abstract

Everybody knows that HTML applications are lean and fast, but when it comes to complicated features they are unable to fulfill the expectation of the end user. For this reason everybody wants Rich Clients, which provide comfortable user interfaces. The open source development platform Eclipse really provides such as Rich Client architecture and supports the development process with a couple of components. Here it is very easy for the developer that he can focus his attention on creating the application logic. A Rich Client application consists of plug-ins, which are software components that extend the platform. Even the Eclipse IDE itself is a plug-in. It also provides the feature that new functionality can be integrated by extending other plug-ins extension-points.

In Rich Client application, the user interface forms a big part. Eclipse ships with the Standard Widget Toolkit (SWT), which is a complete graphic and widget library. SWT uses the widgets of the underlying operating system and is therefore fast and provides a native look and feel. This thesis copes with the development of a Rich Client application, which can be used to navigate the Earth. The main component of this application is the Earth Navigator.

In this dissertation I have built a powerful, real-life application using JOGL and the National Aeronautics and Space Administration (NASA) World Wind SDK. The application is a 3D Earth navigator, similar to Google Earth. It uses the following components:

1. SDK, which allows developers to embed World Wind’s geospatial visualization technology (which uses NASA’s geospatial data) in their own applications. For my application I have downloaded it from NASA’s Website.

2. The Google Maps API, which allows you to find the specific latitude and longitude for an address.

To sum it up, this thesis gives an overview about the Eclipse Rich Client Platform and its usefulness for application development. Beside this, it provides the Performance Analysis of Existing Navigator Software and New Model of Earth Navigator using Eclipse and its Rich Client Platform. This work describes the advantages and disadvantages of using this platform and appraises various concepts that can be used to build applications on top of it.