

Alborz: An Interactive Toolkit to Extract Static and Dynamic Views of a Software System

Kamran Sartipi and Lingdong Ye and Hossein Safyallah
Dept. Computing and Software, McMaster University
Hamilton, ON, L8S 4K1, Canada
{sartipi, lye, safyalh}@mcmaster.ca

Abstract

Alborz is a multi-view, interactive, and wizard-based software architecture reconstruction and evaluation toolkit that takes advantage of the Eclipse plugin technology to provide feature extensibility, and uses GXL format to interoperate with other reverse engineering tools. The current version of Alborz toolkit supports static and dynamic views of a software system. For the static view, the toolkit extracts the structure of a software system using wizard-guided forms that define the high-level view of the system as abstract components and connectors that are then mapped onto the low-level source graph to find approximate matching within the software system. For the dynamic view, the toolkit extracts high-frequent execution patterns within the software system by running feature specific task scenarios, in order to extract system functionality for structural evaluation. The toolkit will be available as an Eclipse plug-in to serve the software reverse engineering community.