M.S. Thesis Abstract:

A smart spell checker system implementation using adaptive software architecture

Abstract

The subject of this paper is a Smart Spell Checker System (SSCS) that can adapt to a particular user by using the user's feedback for adjusting its behavior. The result of the adjustment is manifested in a different ordering of the suggestions to the user on how a particular spelling mistake should be corrected. The SSCS uses the Adaptive Software Architecture (ASA). The ASA consists of a hierarchy of layers, each containing a number of components called *Knowledge Sources*. The layers are connected by a software bus called Domain. External elements include *User* and *Initiator(s)*. Initiators supply input data to the system. The system also includes an *Evaluator* that generates feedback. Each Knowledge Source is responsible for generating suggestions for correcting a specific type of error. Feedback is propagated to Knowledge Sources after the user makes a selection of the correction. In response to feedback, Knowledge Sources adjust their algorithms. In this paper we present the results of the evaluation of the adaptability of the SSCS.