

Mu for Functional Languages: Retargeting the GHC Backend to a Micro Virtual Machine

Pavel Zakopaylo
Australian National University

Abstract

The Mu Micro Virtual Machine is intended to be a general platform for high level programming languages. However, there are currently no Mu clients implemented for any functional language. To address this we wish to port the backend of the Glasgow Haskell Compiler to run on Mu. Haskell is a garbage collected, cross platform language with support for concurrency, which makes it a good match for the abstractions provided by Mu. In this talk we outline the current state of the Mu Haskell client and detail the challenges in its implementation. The ultimate aim of this project is twofold. First, we wish to demonstrate the feasibility of implementing functional languages on Mu. And second, building a Haskell client on Mu will allow it to take advantage of the abstractions over memory, hardware and concurrency provided by Mu.