Tock: One Year On

Adam T. SAMPSON and Neil C.C. BROWN

Computing Laboratory, University of Kent

A.T.Sampson@kent.ac.uk, neil@twistedsquare.com

Abstract. Tock is a compiler for concurrent programming languages under development at the University of Kent. It translates occam-π and Rain into portable, high-performance C or C++. It is implemented in Haskell using the nanopass approach, and aims to make it easy to experiment with new language and compiler features. Since our initial presentation of Tock at CPA 2007, we have added new frontends and backends, implemented a parallel usage checker based on the Omega test, improved the effectiveness of Tock's test suite, developed more efficient tree traversals using generic programming – and more besides! In this fringe session, we will describe our recent work on Tock, discuss our plans for the project, and show how it can be of use to other process-oriented programming researchers.

Keywords. concurrency, compilation, generics, Haskell, nanopass, occam-π, Rain.