Yet Another Pushdown Automata Compiler

DSLs, Macros, and Flow Optimization!

Daniel King

College of Computer and Information Science

Northeastern University

danking@ccs.neu.edu

POPL 2012 Student Lightning Talk

Philadelphia, PA. January 24, 2012

DSLs, Macros, and Flow Optimization!

Provide the weakest tool for the job to users, and make the barrier of entry a require statement.

Ignore specialized performance enhancing, table compressing techniques in favor of a general push down flow analysis which hopes to not only produce fast LALR grammars, but in fact recognize finite portions of the PDA and demote them to FSAs.

Use Racket macros to hook all this together and take advantage of a preexisting compiler and get the 2.5 to 6.5 parse speed up just from compiling!