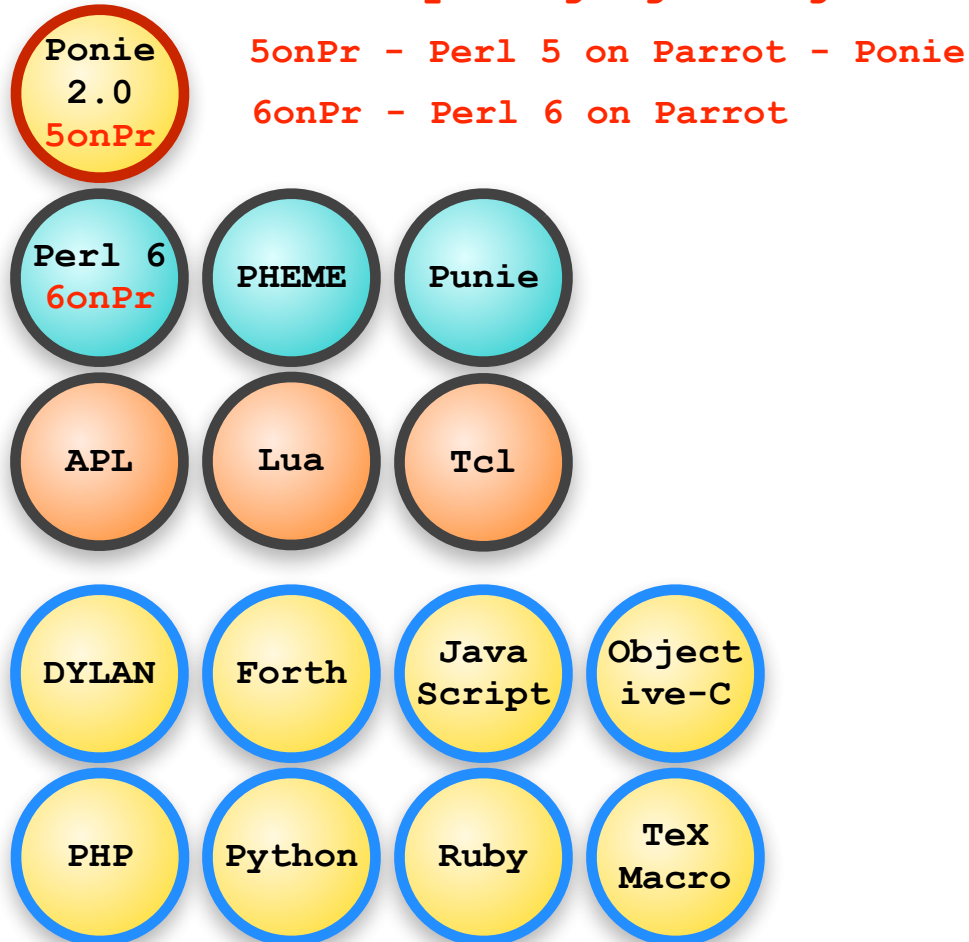


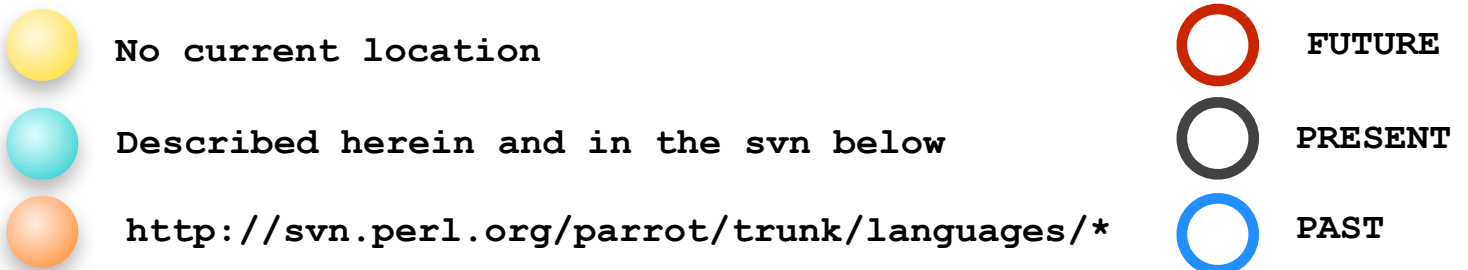
Pugs Language/Compiler Overview

Primary Language Targets



Parrot VM targets
Parrot is a PolyGlott

<http://svn.perl.org/parrot/trunk/languages/>



Pugs Language Overview



Perl 6 on Haskell - Pugs



Perl 6 on Perl 5 - CPAN to PUGS

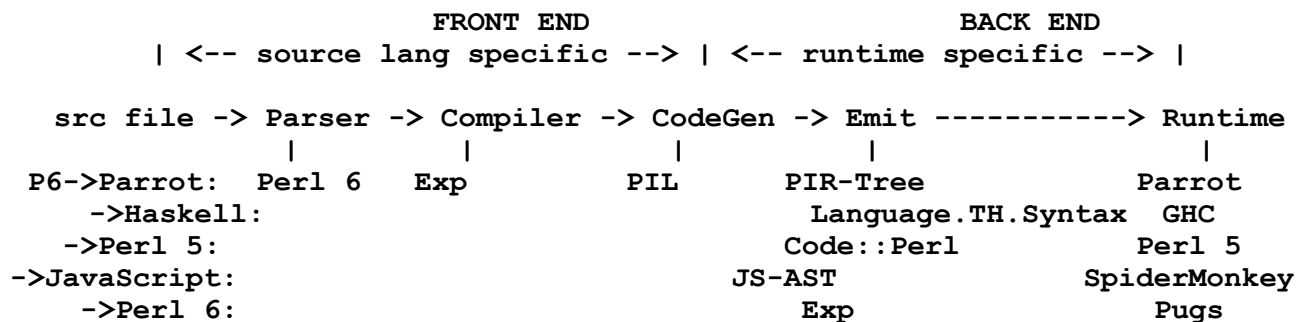


Perl 6 on JavaScript - Pirate









Perl 6 on Perl 6

Code will flow through several phases inside Pugs, as follows:

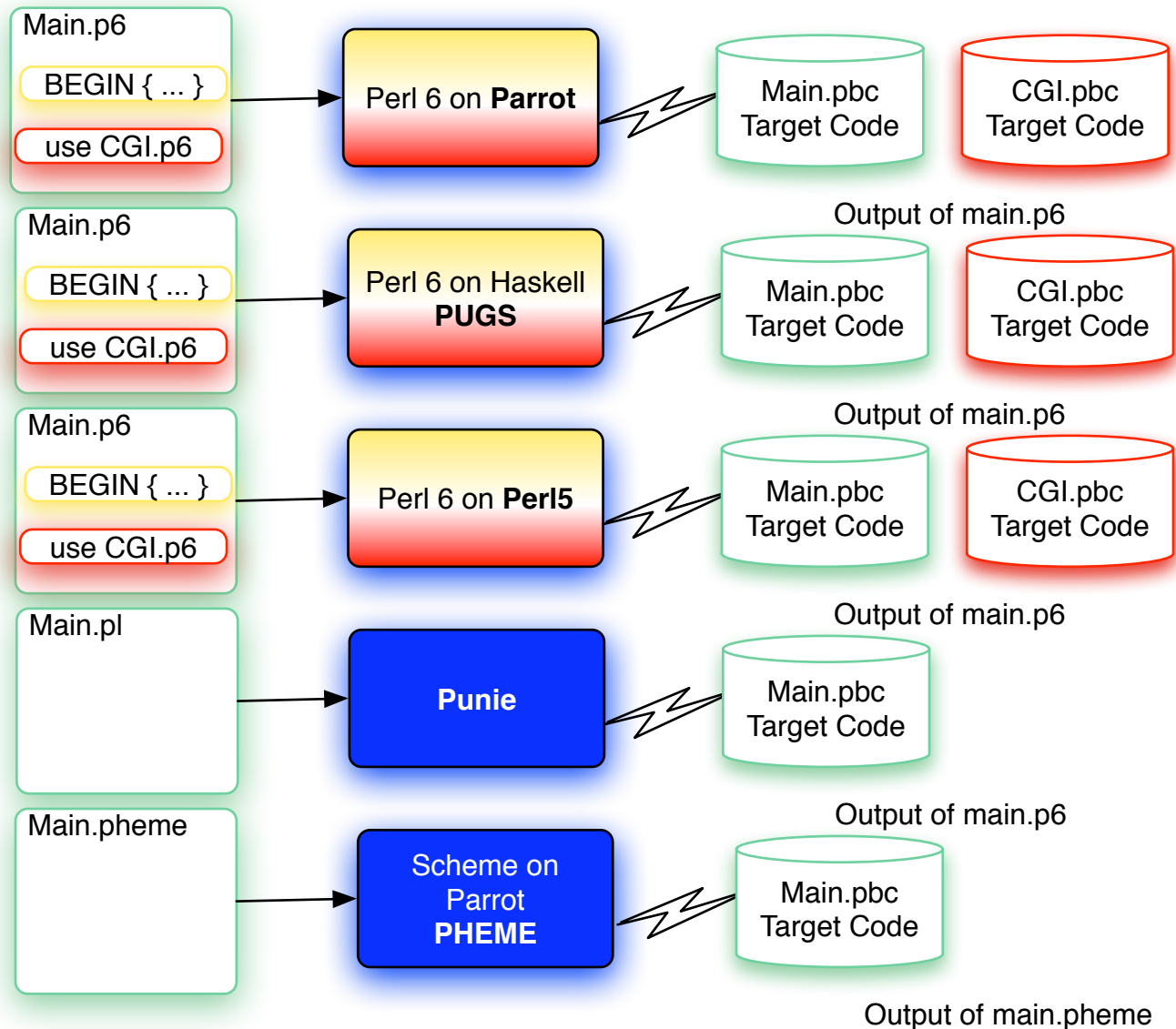


URL for Pugs plan =>

<http://svn.openfoundry.org/pugs/doc/notes/plan>

- | | | | |
|--|---|---|---------|
|  | No current location |  | FUTURE |
|  | Described herein and in the svn below |  | PRESENT |
|  | http://svn.perl.org/parrot/trunk/languages/* |  | PAST |

Perl 6 Compilation Overview



GOAL 1:
Demonstrate the
Doctrine of separate compilation

Goal 2:
Demonstrate the defining feature of Perl
Interleaved Parse Execution Cycle

GOAL 3:
Demonstrate quantity of differentiated
parsers

GOAL 4:
Demonstrate the **benefits** of the
Tree Grammar Compiler

GOAL 5:
Demonstrate **specifics** of the Tree
Grammar compilation

5

4

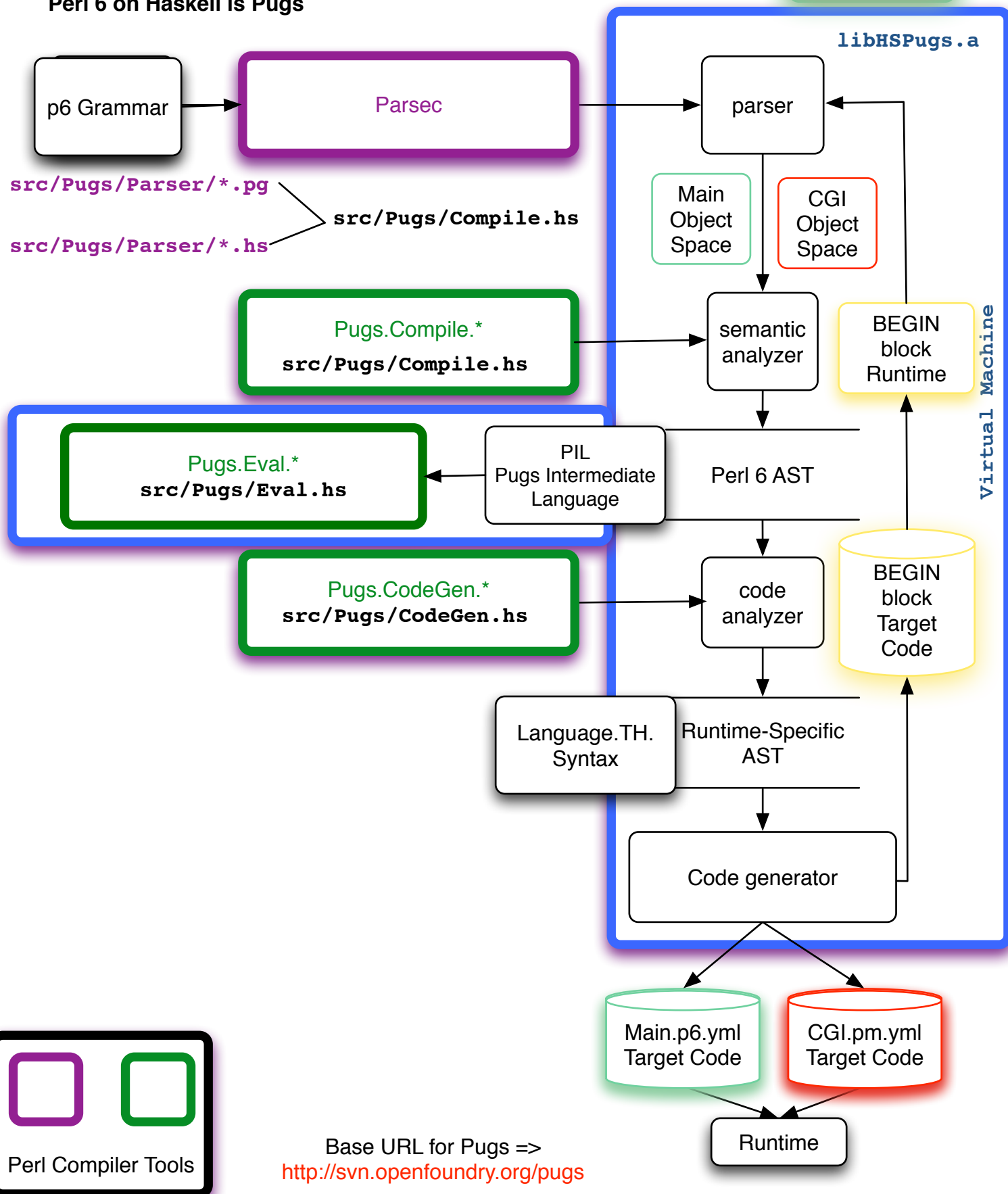
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Main.p6

BEGIN { ... }

use CGI.pm

Perl 6 on Haskell is Pugs



Perl Compiler Tools

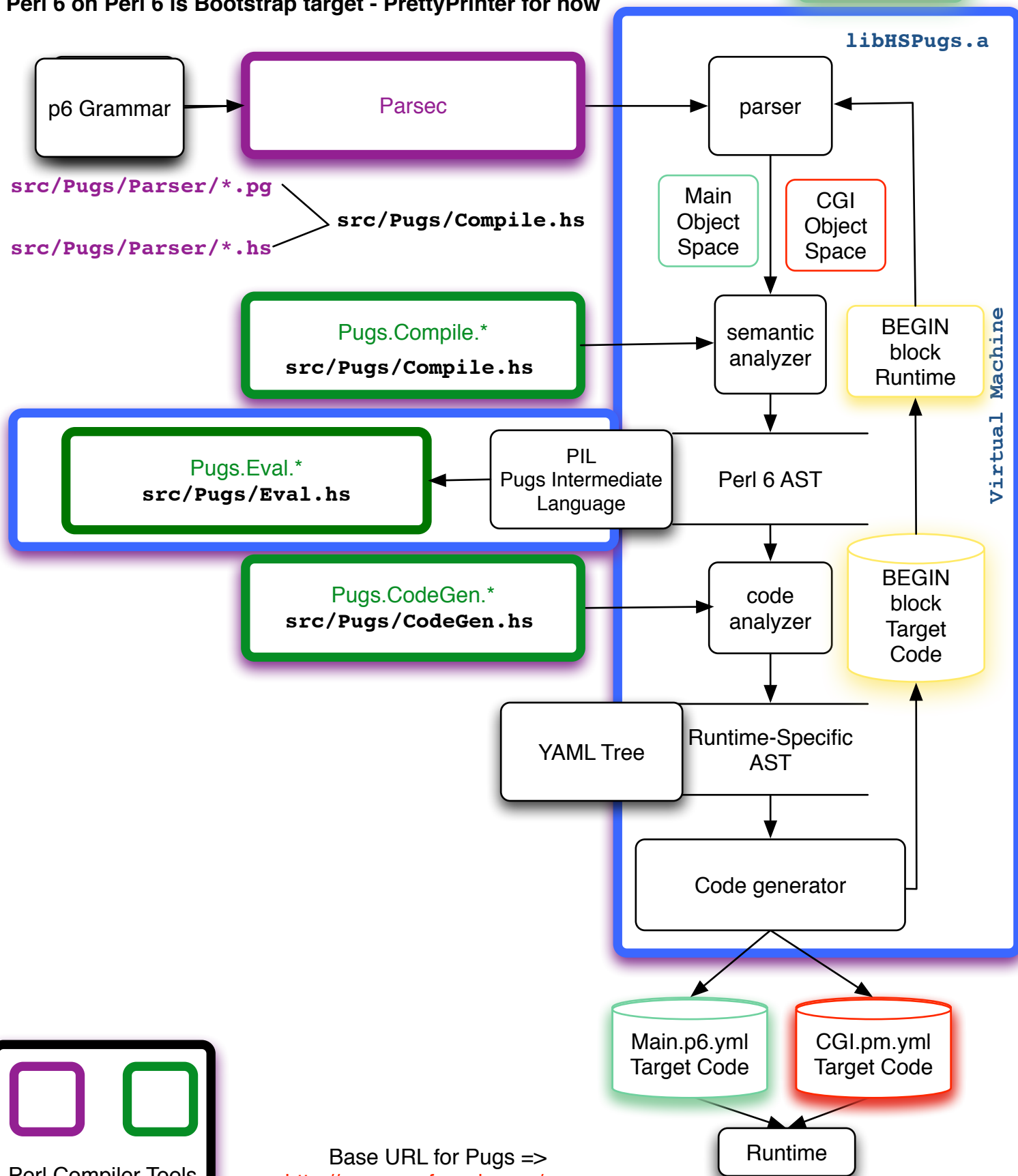
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Main.p6

BEGIN { ... }

use CGI.pm

Perl 6 on Perl 6 is Bootstrap target - PrettyPrinter for now



Perl Compiler Tools

Base URL for Pugs =>

<http://svn.openfoundry.org/pugs>

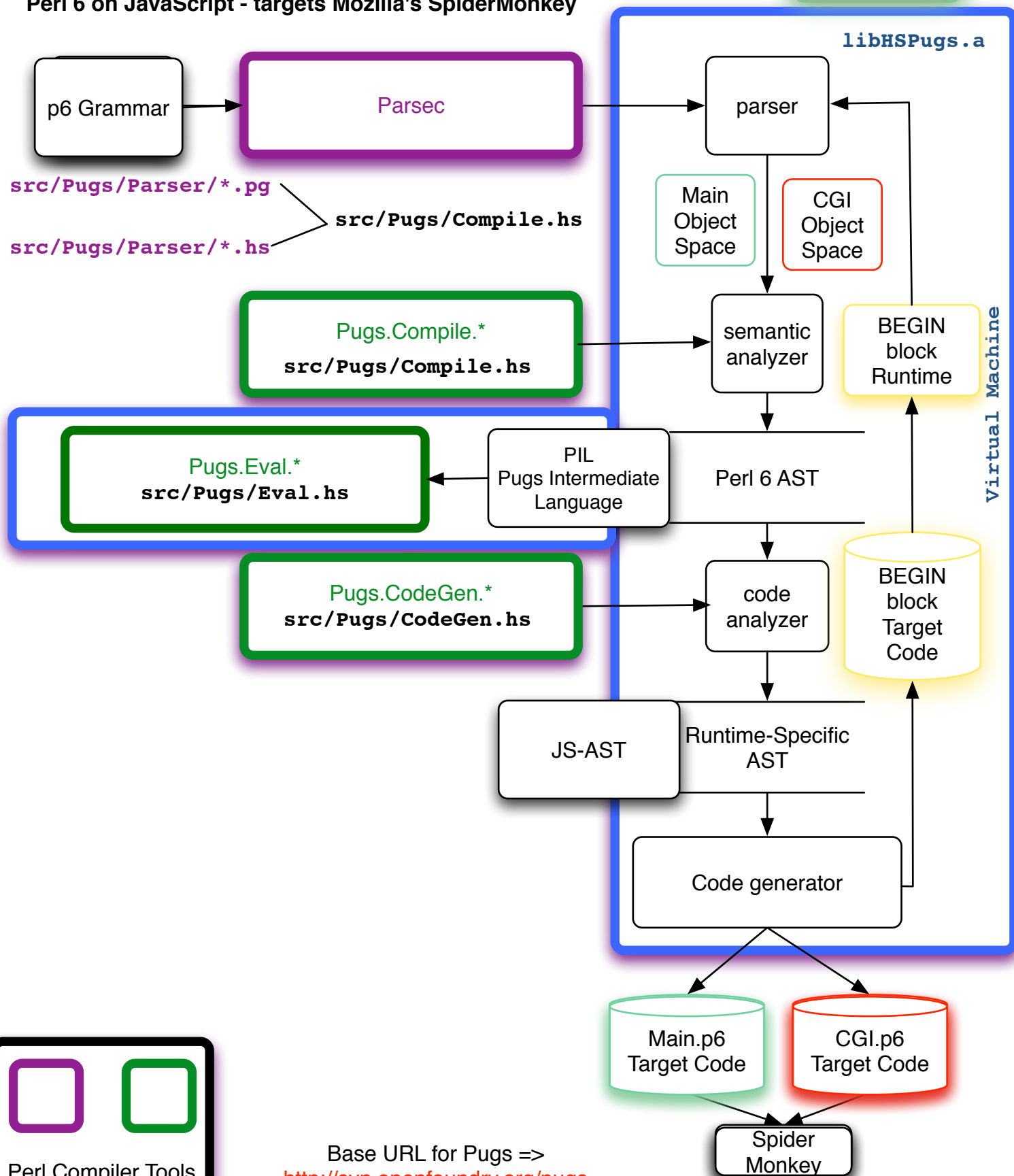
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Main.p6

BEGIN { ... }

use CGI.pm

Perl 6 on JavaScript - targets Mozilla's SpiderMonkey



Perl Compiler Tools

Base URL for Pugs =>

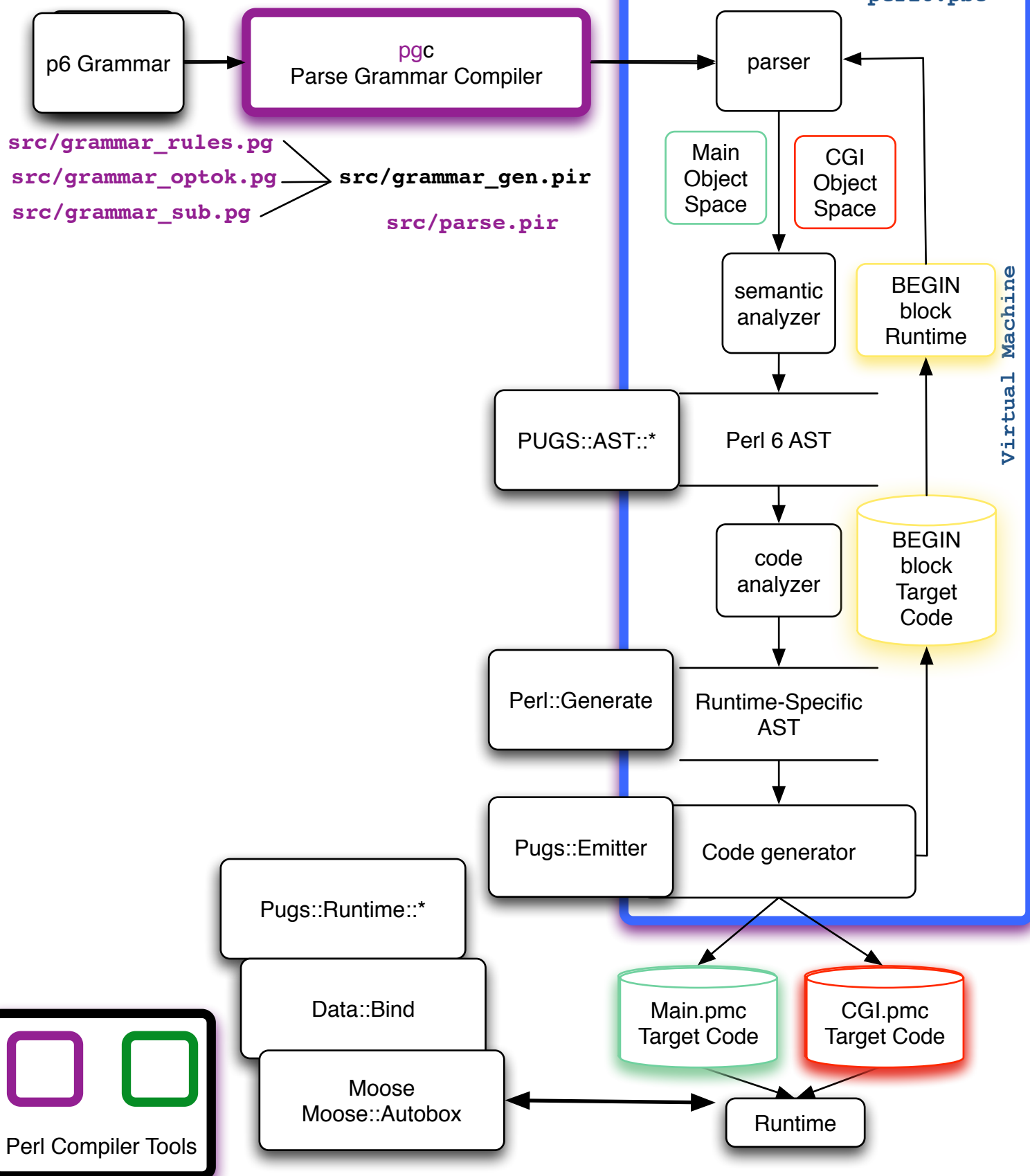
<http://svn.openfoundry.org/pugs>

Main.p6

BEGIN { ... }

use CGI.pm

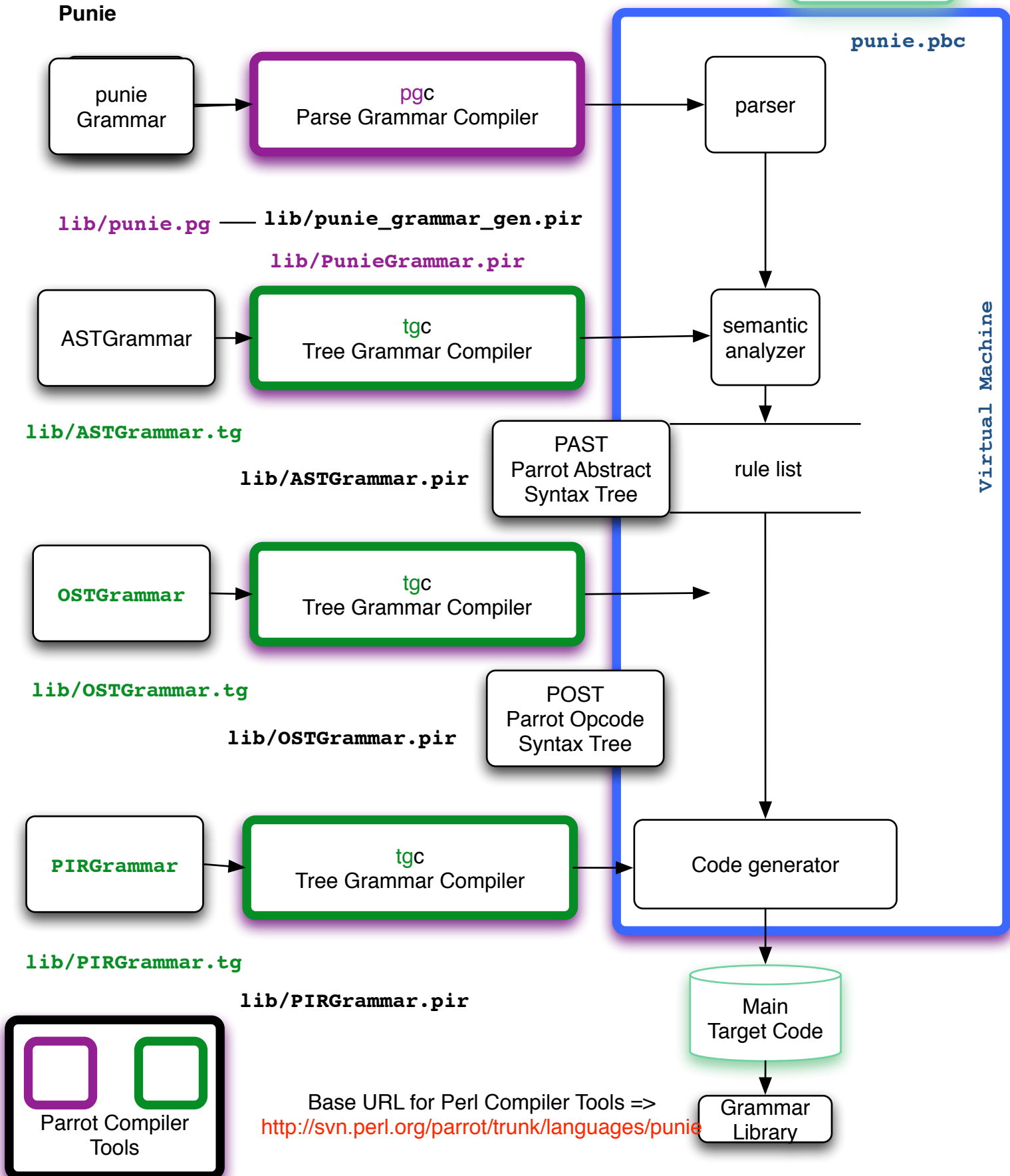
Perl 6 on Perl 5



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grammar.tg

Punie



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source
[.pHEME]

PHEME (Parrot based Scheme)

lib/pHEME_compiler.pir



lib/pHEME.g — **lib/pHEME_grammar_gen.pir**

lib/PhemeGrammar.pir **lib/PhemeGrammar.pbc**

lib/PhemeSymbols.pir **lib/PhemeSymbols.pbc**



lib/pge2past.tg

../../../../compilers/past/PAST.pir

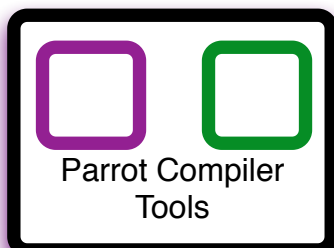


lib/past2post.tg

lib/POST.pir

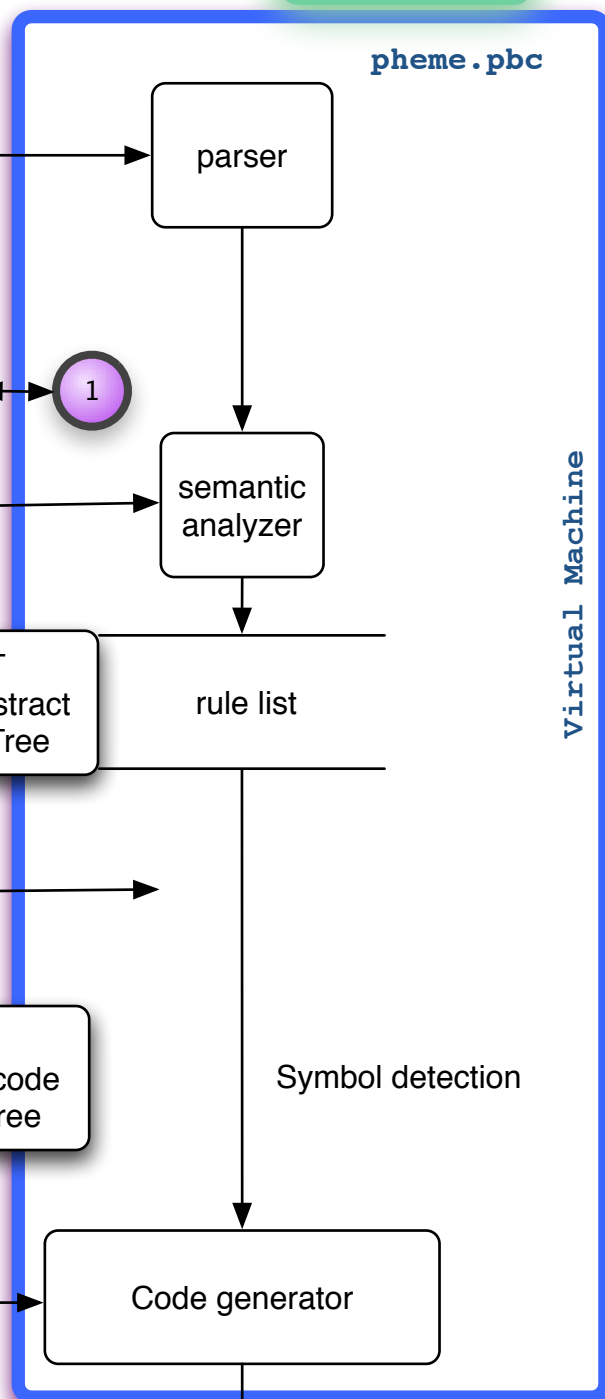


lib/post2pir.tg



1 **lib/PhemeSymbols.pbc**
lib/PhemeObjects.pir

Base URL for Perl Compiler Tools =>
<http://svn.perl.org/parrot/trunk/languages/pHEME>



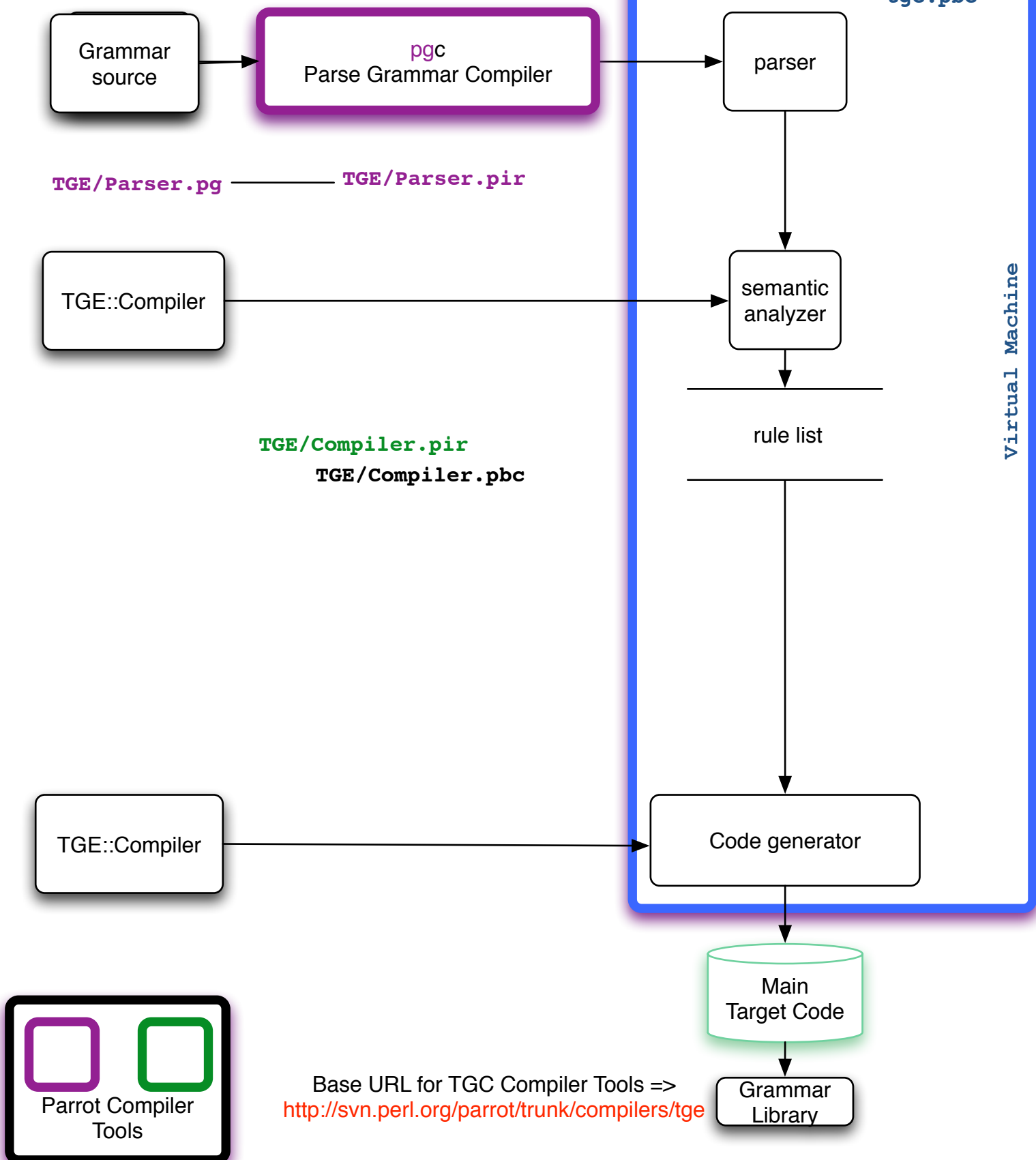
Main
Target Code

Interpreted
code

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grammar.tg

Tree Grammar Compilation



Tree Grammar Compiler Benefits

AST to OST operations by project

Allison Randal: Punie

1. Reordering nested subroutines outside any containing subroutine
2. Simplifying complex expressions into a series of single operator expressions
3. Simplifying the handling of conditionals, such as if ... then ... else

chromatic: PHEME

1. Find names of functions
2. Within functions, find variable names for functions

Perl Language Addressbook

Active	Developers		Inactive	Developers
APL <i>APL on Parrot</i>	Patrick Michaud Will Coleda (coke)		Cardinal (Ruby)	Phil Thomson
PHEME <i>Scheme on Parrot</i>	chromatic		BASIC	
Perl6 <i>Perl 6 on Parrot</i>	Patrick Michaud		PHP	
Pirate <i>Python on Parrot</i>	Tyler Coumbes Michal Wallace		Ponie 1.0	
ParTcl <i>Tcl on Parrot</i>	mdiep		Forth	
Punie <i>Perl 1 on Parrot</i>	Allison Randal		JavaScript	
Pugs <i>Perl 6 on Perl 5</i> <i>Perl 6 on Haskell</i> <i>Perl 6 on JavaScript</i> <i>Perl 6 on Parrot</i>	Audrey/Flavio See Pugs AUTHORS file		BF	
			TeX macro	
Planned for future	Developers		Lua	
Ponie 2.0 <i>Perl 5 on Parrot</i>	Patrick Michaud Allison Randal		Objective-C	
			Dylan	
			Forth	