

Building Domain Specific Languages with the Metacasanova Metacompiler

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Introduction

Importance of domain specific languages

- They allow to express the solution of a problem in a more natural way.
- They provide constructs that are domain-specific not provided by GPL's.
- They allow to develop complete application programs for a specific domain more quickly.

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CONSEQUENCE: It is desirable to deploy a DSL's when the scope of the application is very specific.

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Some DSL's examples

DSL	Application
Lex and Yacc	program lexing and parsing
PERL	text/file manipulation/scripting
VHDL	hardware description
T _E X, L ^A T _E X, troff	document layout
HTML, SGML	document markup
SQL, LDL, QUEL	databases
pic, postscript	2D graphics
Open GL	high-level 3D graphics
Tcl, Tk	GUI scripting
Mathematica, Maple	symbolic computation
AutoLisp/AutoCAD	computer aided design
Csh	OS scripting (Unix)
IDL	component technology (COM/CORBA)
Emacs Lisp	text editing
Prolog	logic
Visual Basic	scripting and more
Excel Macro Language	spreadsheets and many things never intended