

Pascal-F Verifier Internal Design Document

CPCI #1 -- Syntactic Processing

Scott D. Johnson

John Nagle

FACC / Palo Alto

1. Introduction

Phase 1 of the Pascal-F Verifier is a modified version of the Pascal-F compiler. Much of the same source text is used in both systems. The source text is divided into the sections given below. Both the first pass of the Verifier and a modified first pass of the compiler can be made from these files. The first pass of the compiler is built by compiling P1X-CMP.p; the first pass of the Verifier is built by compiling P1X-VER.p. The modified first pass of the compiler accepts the syntax defined in the Verifier manual but discards all verifier-only items.

2. Source files

ERMSG-TXT	Error message text. The program looks for this file in /usr/p/frl/bin.d/ERMSG-TXT when looking up error messages. Used both by the compiler and the Verifier.
P1X-CMP.p	Main for compiler; consists only of includes.
P1X-PAS00.i	Compiler/verifier common files.
P1X-PAS01.i	
P1X-PAS02.i	
P1X-PAS03.i	
P1X-PAS04.i	
P1X-PAS05.i	
P1X-PAS06.i	
P1X-PAS07.i	
P1X-PAS08.i	
P1X-PAS09.i	
P1X-PAS10.i	
P1X-PAS11.i	
P1X-PAS12.i	
P1X-PAS13.i	
P1X-PAS14.i	
P1X-UNIX00.i	Unix-only files, used by both compiler and Verifier when running on UNIX.
P1X-UNIX01.i	
P1X-UNIX02.i	

P1X-UNIX03.i	
P1X-VER.p	Verifier main program; consists only of includes.
P1X-VER00.h	Verifier definitions file for constants. This file is also used by pass 2 of the Verifier.
P1X-VER00.i	Verifier constants not needed in pass 2.
P1X-VER01.h	Verifier definitions file for types. This file is also used by pass 2 of the Verifier.
P1X-VER02.i	Verifier variables.
P1X-VER07.i	Code added for verifier use is here, where entire procedures and functions were added. The primary addition is the symbol table output processor, which produces the file "pasf-vars".

3. Inputs and outputs

3.1 Input files

The only input file is the source program. Includes are understood with Pascal-F include syntax but with UNIX pathnames in the include form.

3.2 Output files

pasf-data	VALUE clause constant values; always produced.
pasf-files	List of files included; used with pasf-source to get the names of files for diagnostics. This is a text file.
pasf-icode	The ICODE (or RCODE) file; used by both the compiler and the verifier.
pasf-source	Source code in a format for random access lookup; produced only by Verifier and used by pass 2 to produce diagnostics.
pasf-symbols	Symbol table for compiler; produced by both versions.
pasf-vars	Variable file for verifier; produced only by Verifier version.