

UPC2Prom

User Manual

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1 Introduction

The UPC2Prom package is designed to facilitate verification of UPC programs. This tool transforms a UPC program to Promela which can be used by SPIN model checker.

2 System Requirements

- Linux operating system,
- `cpp` C preprocessor

3 How to install

The tool simply consists of three parts:

- `ctool` shared library, which parses UPC code,
- UPC2Prom a program which uses `ctool`.

Create a folder. Copy both files into a folder. To run the program first you need to introduce the shared library to your OS. This could be done setting `LD_LIBRARY_PATH` to the folder that you just created. To make sure that you have set this path correctly, you can use Linux command `ldd ./UPC2Prom` in the folder. It should show the directory of `ctool`.

4 UPC2Prom command structure

Now, for transforming a UPC program say `myUPCcode.c` to a Promela code, say `newPromCode.pml` type in shell command line:

```
UPC2Prom myUPCcode.c newPromCode
```

5 Model checking the code

To model check your program you need to have `dSPIN`. Download it from <http://www-verimag.imag.fr/~iosif/dspin/> and install it.

6 Support

Please address bugs and comments to Amin Alipour malipour@mtu.edu.