Proof Sketches for the AMIDOL Intermediate Representation

Eric Davis, Alec Theriault, and Ryan Wright

Galois, Inc

Abstract

1   Introduction

One instruction set computer (OISC) and ultimate reduced instruction set computer (URISC) [2].

2   Acknowledgments

3   Resources, web sites, etc.

The current AMIDOL source code, including example models and documentation, is available at the AMIDOL Github site `https://github.com/GaloisInc/AMIDOL`.

Three classes of Petri nets:

- Condition-event nets (C/E-nets).

- Place-transition nets (P/T-nets).

- Predicate-event nets (P/E-nets).

[3]

To be classed as a P/T-net the Petri net must lift the restriction of a single token residing in a given place, which is present for C/E-nets. While this opens the door to infinite state-spaces, it also gives a petri-net the equivalent of an infinite bi-directional tape required for Turing machines.

[1]

References

[1] Gianfranco Ciardo. Petri nets with marking-dependent arc cardinality: Properties and analysis. In *International Conference on Application and Theory of Petri Nets*, pages 179–198. Springer, 1994.

[2] Farhad Mavaddat and Behrooz Parhami. Urisc: the ultimate reduced instruction set computer. *International Journal of Electrical Engineering Education*, 25(4):327–334, 1988.

[3] Wolfgang Reisig. *Petri nets: an introduction*, volume 4. Springer Science & Business Media, 2012.