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June 13, 2003

New, New, New NuSPADE

1 The NuSPADE Story (So far...)

1.1 NuSPADE

The original NuSPADE architecture presented in CS-note 6 was a little sketchy on details.

1.2 New NuSPADE

Elaborating on the original NuSPADE architecture the major components and decisions were made as described in CS-note 19, CS-note 20, CS-note 21 and CS-note 36. The architecture described in these notes involved a tight coupling of NuSPADE and the SPADE-PC.

1.3 New, New NuSPADE

During implementation it was found that the tight coupling between NuSPADE and the SPADE-PC was difficult to follow and, significantly, unnecessary. Although never documented, an important change was made to the architecture isolating NuSPADE from the SPADE-PC. This small change made the implementation and presentation of NuSPADE much more straight forward.

1.4 New, New, New NuSPADE

In CS-note 45 it is noted that NuSPADE has progressed from being a VC prover into a program prover. We had always envisaged using NuSPADE to discover invariants and patch the source. However, with the introduction of program analysis, NuSPADE both reads and writes the source code, increasing the role that source code plays in the whole process. This change of focus impacts on the architecture of NuSPADE. Further, additional tools for parsing and analysing the code must be integrated within the whole approach. The latest architecture is illustrated in figure 1.

*Notes in this series are for ϵ-baked ideas, for $1 \geq \epsilon \geq 0$. Only exceptionally should they be cited or distributed outwith the NuSPADE project (EPSRC GR/R24081).

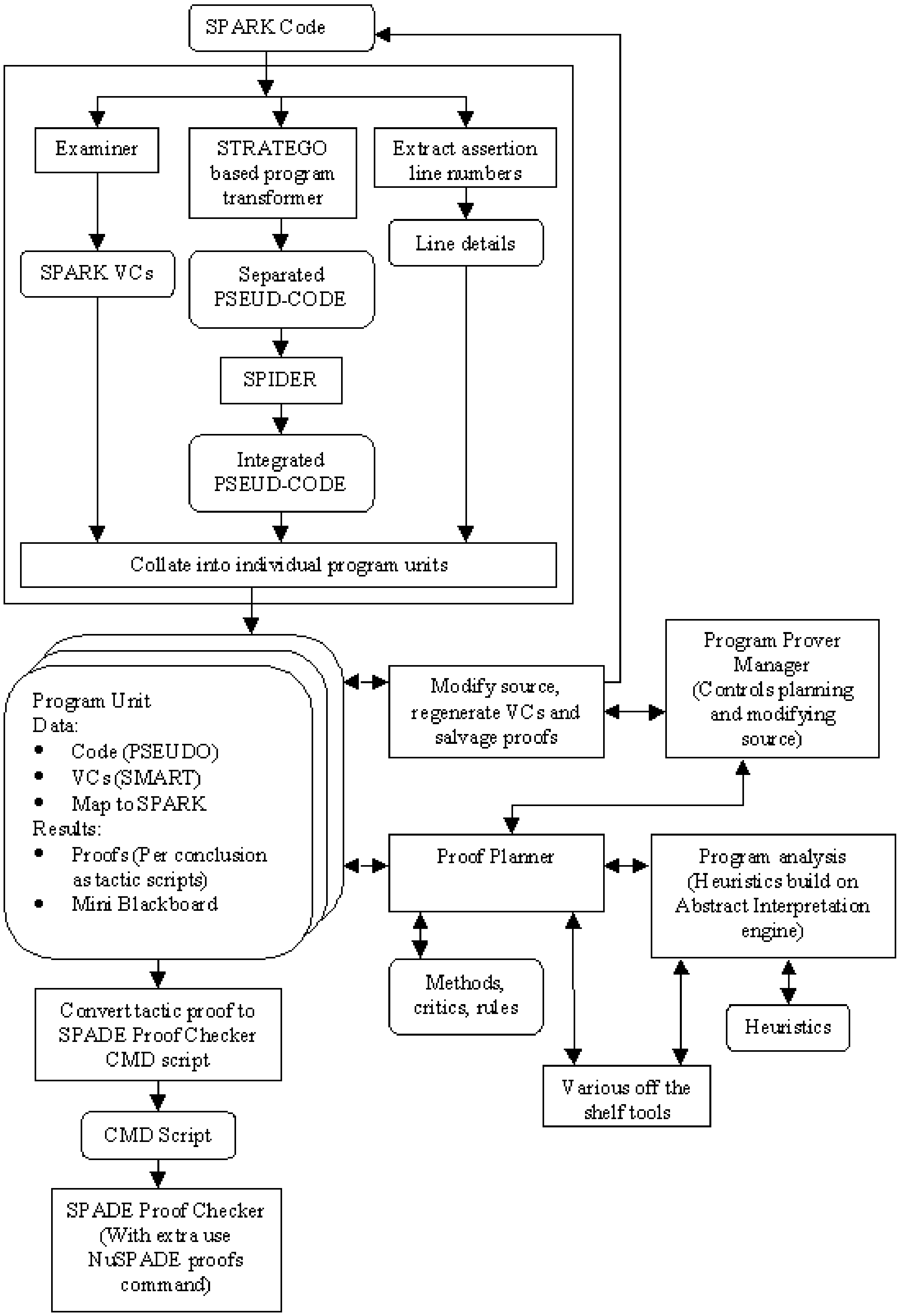

Figure 1: NuSPADE architecture