Z3 is a theorem prover developed at Microsoft research and available as a dynamically linked C++ library in Debian-based distributions. While the library is a whopping 16 MB, and the solver is a tad slow, it's permissive licensing, and number of tactics offered give it a huge potential for use in solving dependencies in a wide variety of applications.

Z3 does not need normalized formulas, but offers higher level abstractions like atmost and atleast and implies, that we will make use of together with boolean variables to translate the dependency problem to a form Z3 understands.

In this post, we'll see how we can apply Z3 to the dependency resolution in APT. We'll only discuss the basics here, a future post will explore optimization criteria and recommends.

[2]

Source URL: http://www.tuxmachines.org/node/158229

Links: