

Humane Assembly Language Tools

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31 January 2006

Abstract

Existing assemblers and support tools remain in a primitive state, ignoring decades of progress in language and usability design. Such tools place an unnecessary distance between a programmer and her code.

HALT eliminates that distance. Our solution is a tightly integrated toolset including a syntax-aware editor, incremental assembler, visual debugger, and simulator for the target architecture. The language translation system is flexible, allowing several useful transformations to the resulting machine language program.

We expect immediate and lasting impact for students and hobbyists, and eventually for professionals.