The Deconstruction of Dyninst

Building new tools, exposing new features

Deconstruction Principles

- Abstract
  - Divide the complex problems of binary analysis and instrumentation into simple, well-defined pieces
  - Generalize prior special-purpose solutions
- Extensible
  - Allow users to add new functionality
  - Export the results of analyses for use by other tools
- Portable
  - Hide platform-specific details
- Promote sharing and reuse
  - Small, well-defined components are easy to adopt
  - Encourage competing alternative approaches

Status

- SymtabAPI supports PE/PDB, ELF/DWARF
- InstructionAPI supports x86, x86-64, PowerPC
- ParseAPI supports x86, x86-64, PowerPC
- StackwalkAPI supports Linux, Windows, BlueGene, FreeBSD
- ProcControlAPI supports Linux, Windows, BlueGene, FreeBSD
- DataflowAPI beta supports x86, x86-64, PowerPC