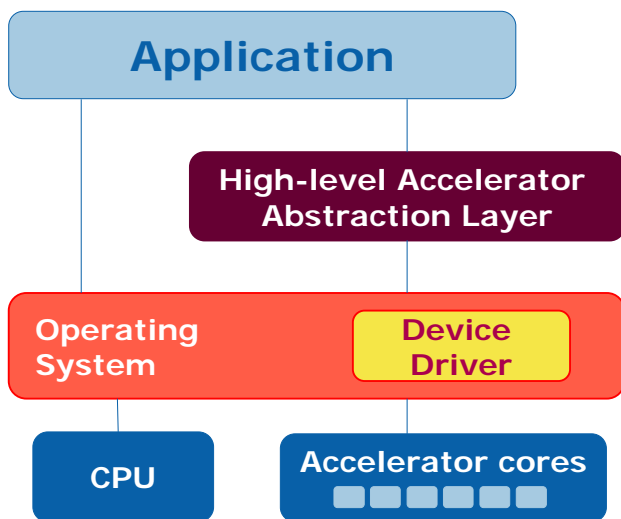# Accelerator Exoskeleton:
IA Look-n-Feel for Heterogeneous Cores

Program heterogeneous cores as easily as SSE

- Shared virtual memory multithreading programming model
- Accelerator code (assembly or domain-specific HLL) inline with high-level C/C++
- Build single *fat* binary containing both IA and accelerator instructions
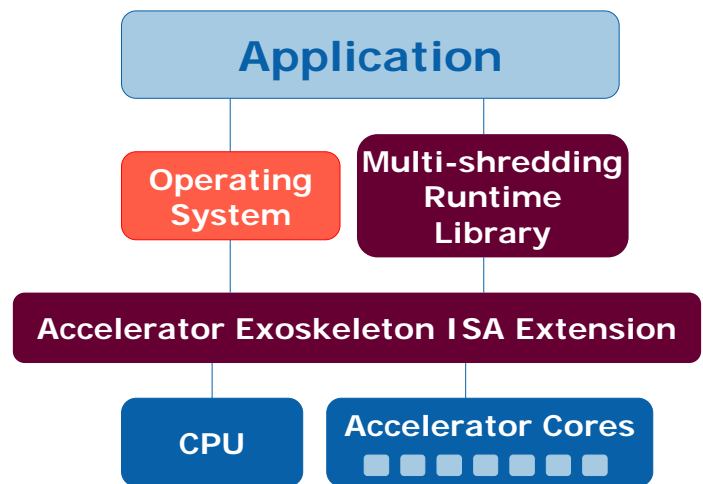- Familiar IA software development tool chains (compiler, runtime, debugger)

Legacy Driver-based SW Ecosystem

- Communication overhead (OS / driver)
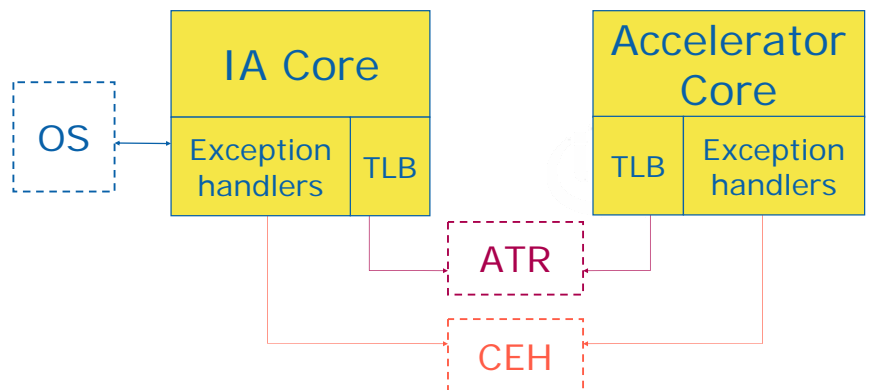- Must map computation to driver / abstraction API

Accelerator Exoskeleton

- IA ISA Extension for MIMD
- Accelerator cores as MIMD functional units
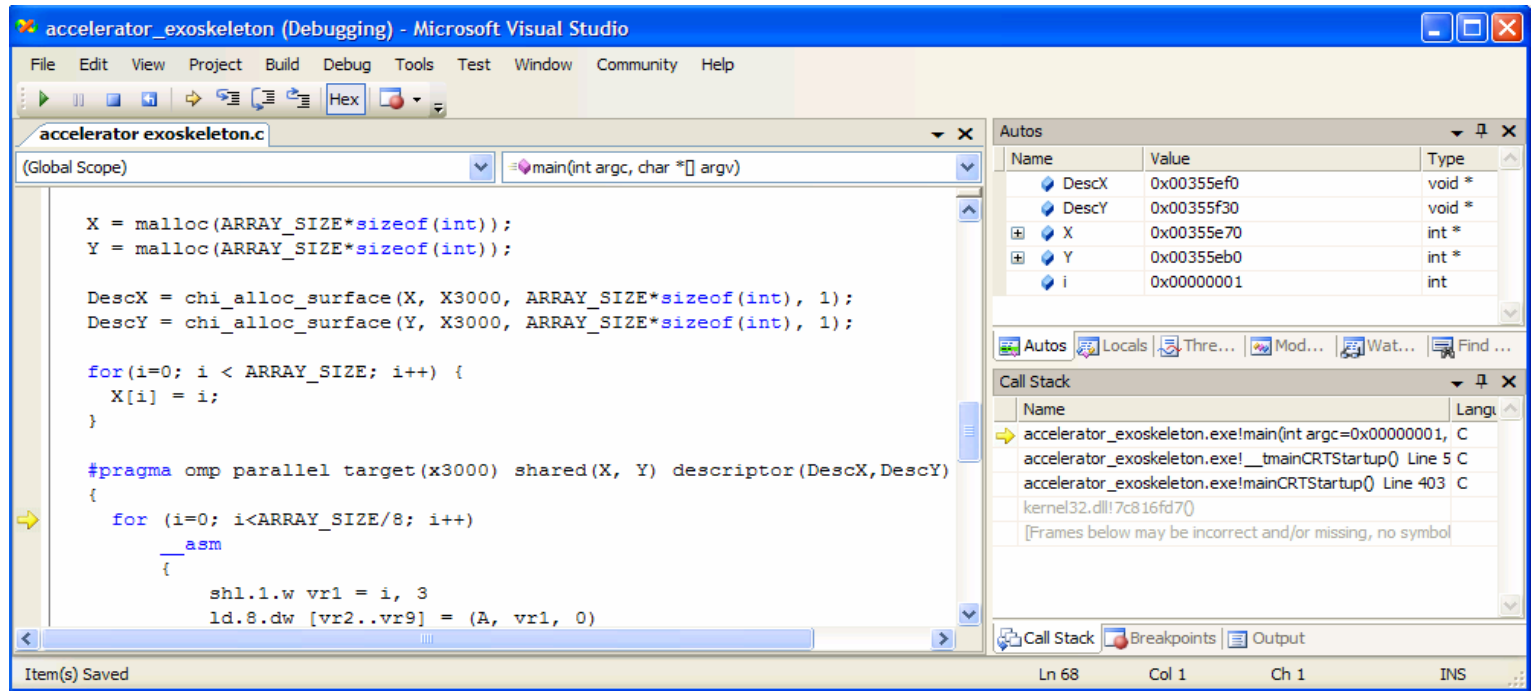- User-level multi-*shredding*

- *CEH* – Handle fault / exception on behalf of accelerator core
- *ATR* – Provide accelerator TLB miss requests in native format

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Accelerator Exoskeleton:
IA Look-n-Feel for Heterogeneous Cores

IA Look-n-Feel IDE (Microsoft Visual Studio) for Application Development

IA Look-n-Feel Compilation and Execution

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