Action team PCS : HEAVEN
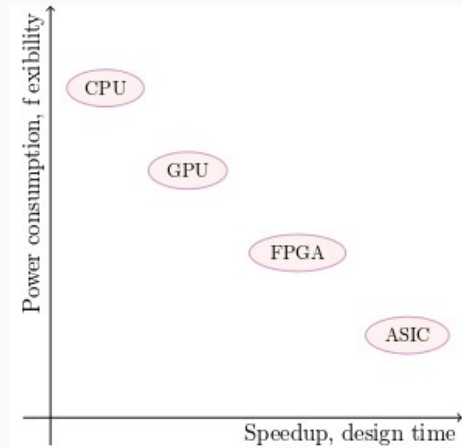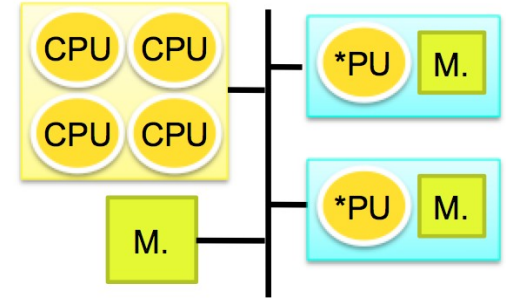
HEterogenous Architectures Versatile Exploitation and programmiNg

Applications:
- Efficiency (power, throughput, latency)
- Ease of programmation
- Portability

Architectures:
- Heterogeneity
  - ≠ tradeoffs
  - FPGA = must have

Problems:
Framework and tools are missing !

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HEAVEN Proposition

OpenMP Application

Compilation

Runtime System

cpu   GPU   ...   fpga

- Evaluation on scientifical apps: embeded image processing, financial
- Compiler-runtime cooperation (extraction of information and exploitation by runtime extensions)
- Runtime adaptation to FPGA specificities (configuration, dynamic reconfiguration, data movement)

Poster: to unveil framework details and results