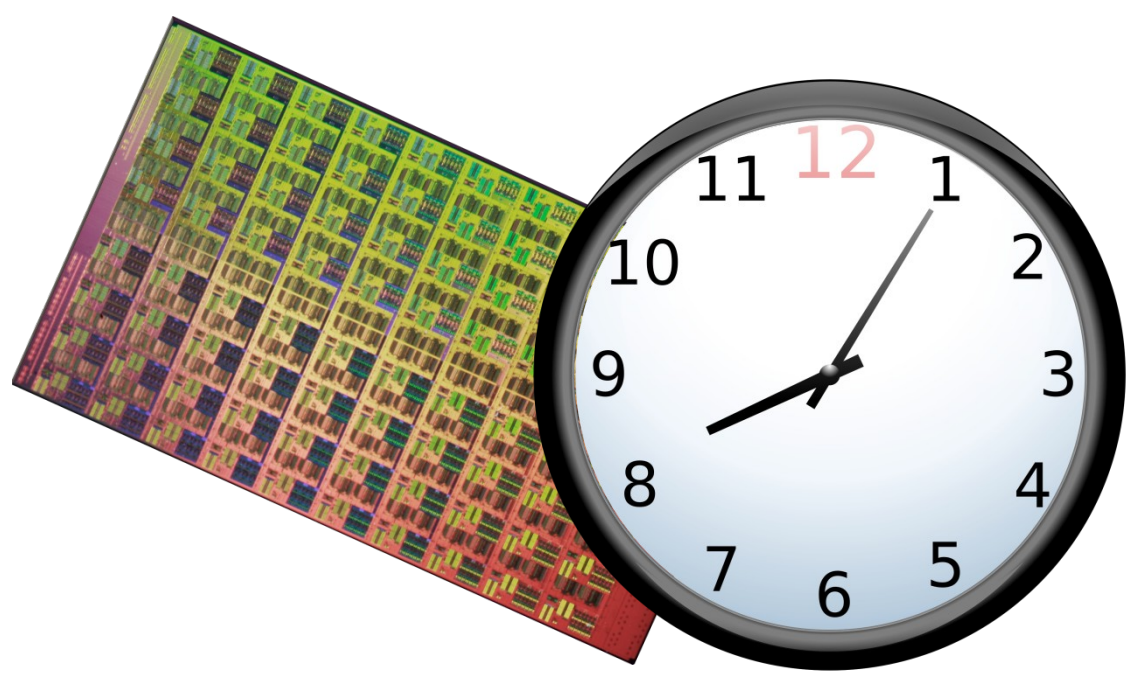


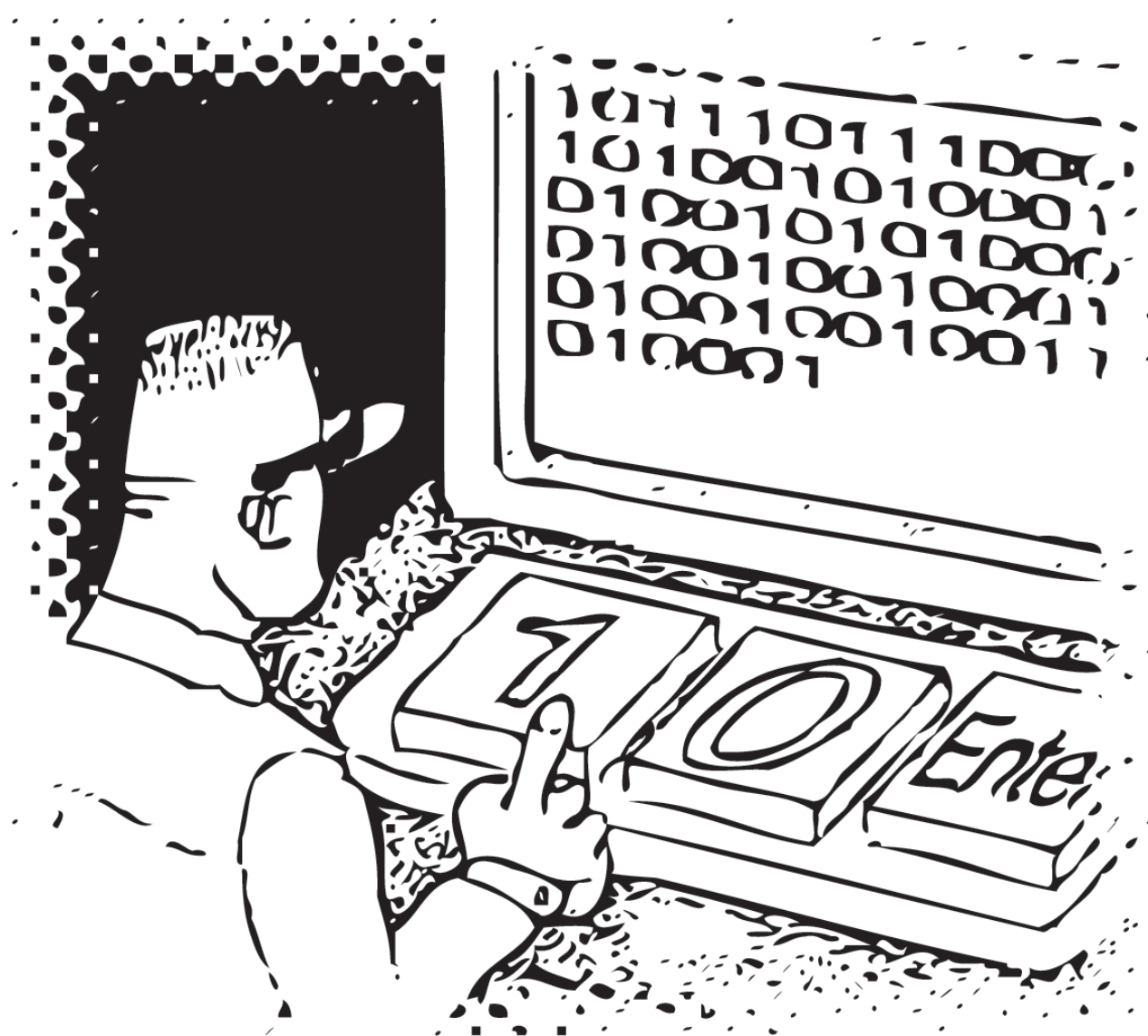
Optimization tools and compilers for IP routing

IP routing

Multi-core hardware with strict runtime performance requirements



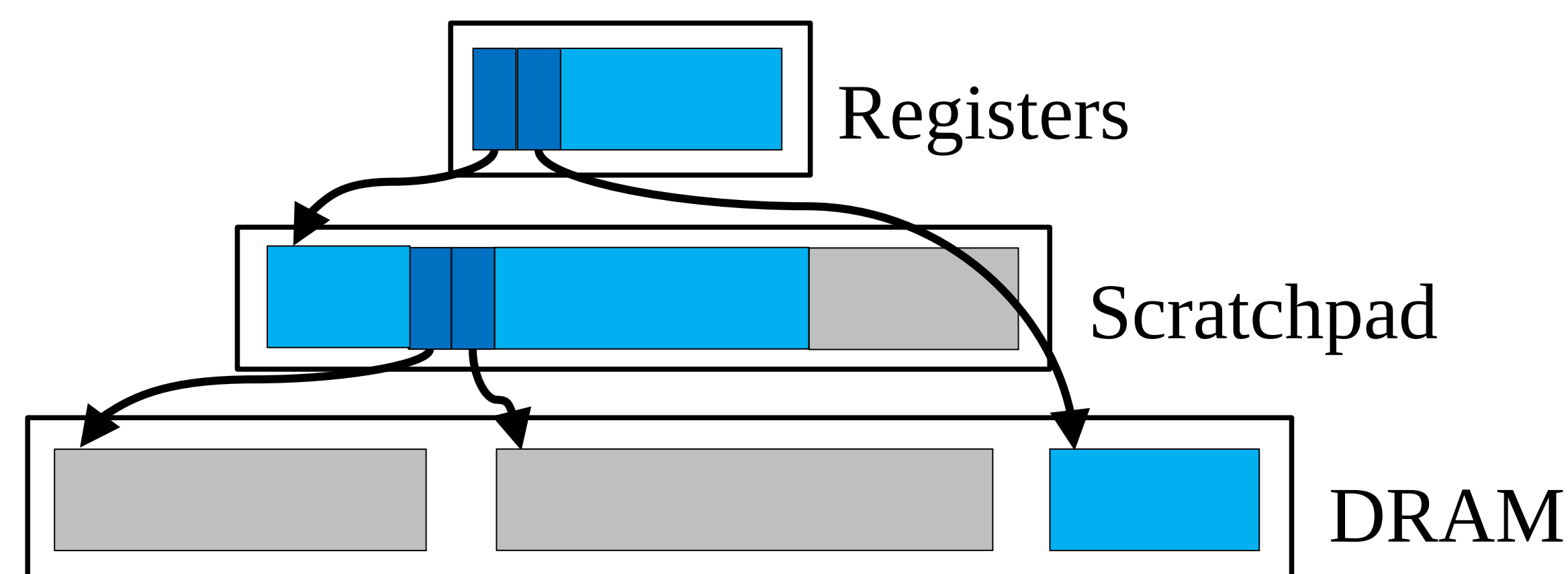
Low-level programming, tool support is essential



Christopher Kania 1997

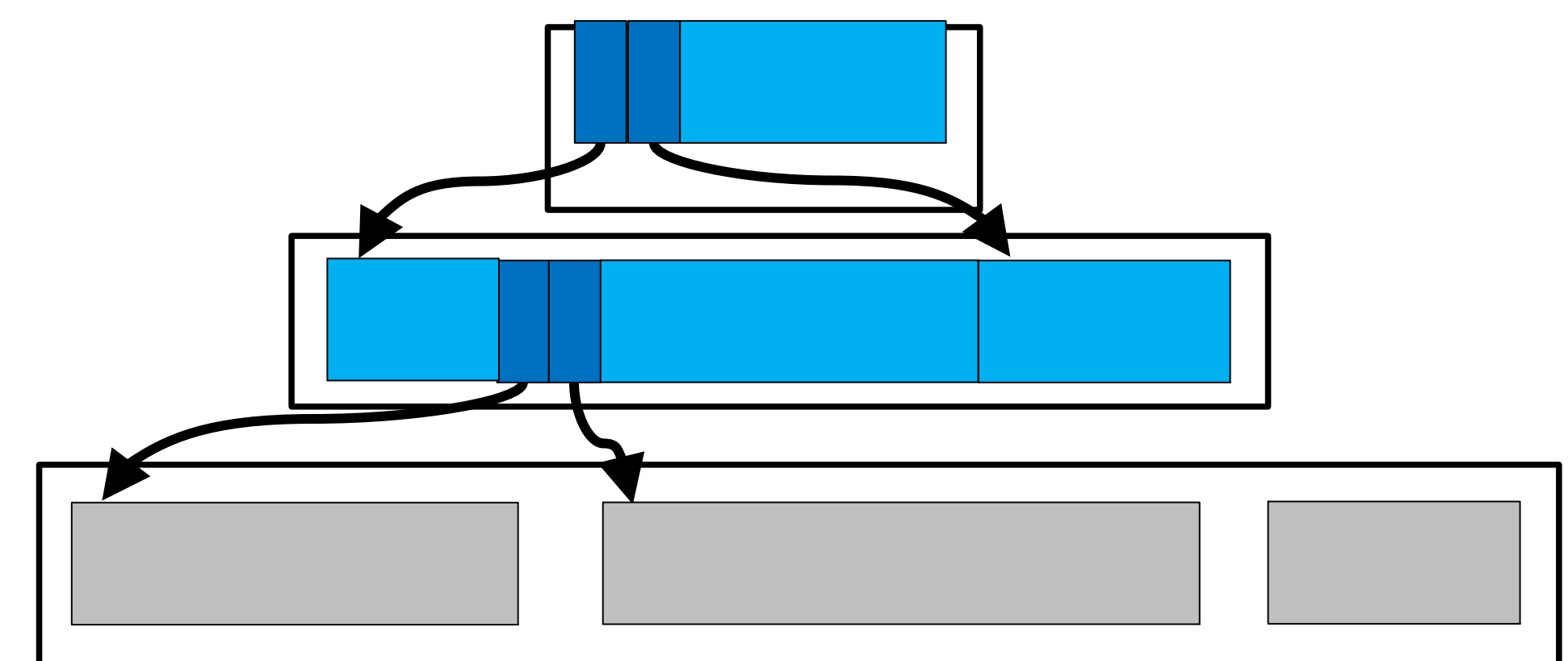


Reconfigure data structures



Currently:
Hard to change
design decisions
Manual editing
of source code

This project:
Easy reconfiguration
of memory allocations
Automatic adaptation
of source code



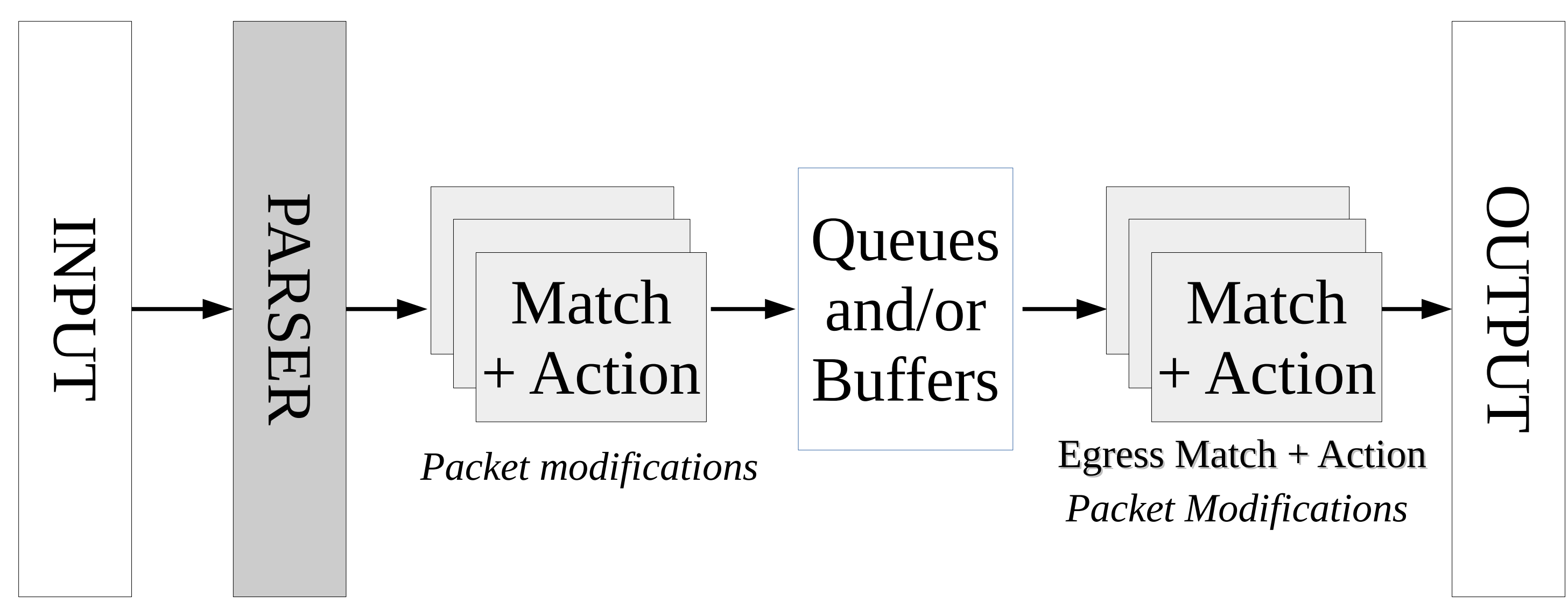
C source code
C++ tools (CLANG)
Memory related optimization steps

P4 Programming Protocol-Independent Packet Processors

High level
language
for routing
algorithms

Backend
Creating
C source for
special hardware

P4 model



Compiler backend
Optimization steps

Interested?

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