

MIPS I

- MIPS is used in: Suns SPARC, Silicon Graphics workstation, Motorola PowerPC, communications, networking (Cisco routers), Nintendo 64, Sony Playstation 2, AIBO, Tesla Model S, Mobileye EyeQ3 computer vision chip (used in BMW, GM, Volvo, Tesla), NASA New Horizon spacecraft, smart home devices (Belkin, LIFX, Ubiquiti Networks, etc.), chromebooks, tablets, portable devices embedded in devices, etc.



MIPS II

- Although we'll be using MIPS as our example, most of what we learn applies to other architectures. In particular, it's very easy to learn ARM assembly language programming once you know MIPS. Also, Intel assembly language programming is easier if you start with MIPS (not the other way round).
- RISC is simpler, cleaner, more elegant than CISC
- RISC design techniques are important
- Before 1980s, chip design was complex and contains redundant instructions.
- Around 1980s, the new RISC design philosophy produced a cleaner design.
- Nowadays CISC chips also use RISC techniques