

5. TLB Contents

TLB entry = VPN, PFN, other bits (valid, protection, dirty, address space ID, ...)

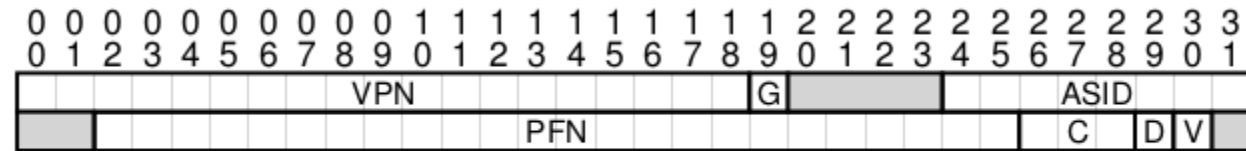


Figure 19.4: A MIPS TLB Entry

32-bit address space with 4KB pages.

19-bit VPN (+1 bit reserved for kernel), 12-bit offset, translated to 24-bit PFN

$$2^{24} \times 4\text{KB} = 2^{36} = 64 \text{ GB physical memory}$$

global bit (G), 8-bit ASID, 3 coherence (C) bits, dirty bit, valid bit.