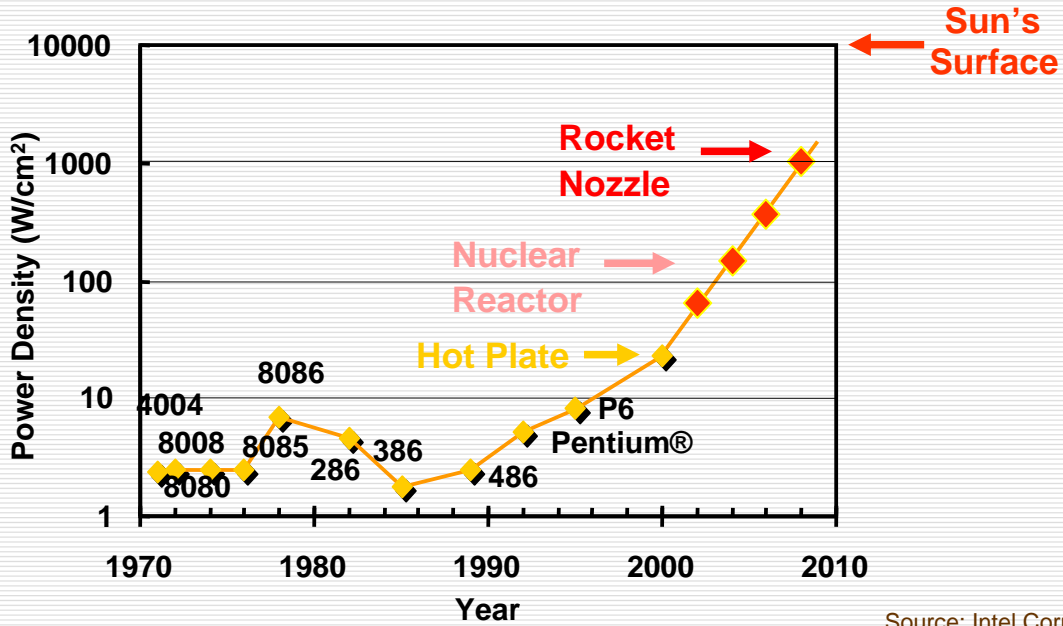


The Current Power Trend



ECE 4100/6100 (23)

Improving Power/Performance

$$P = \alpha C V_{dd}^2 f + V_{dd} I_{st} + V_{dd} I_{leak}$$

- Consider constant die size and decreasing core area each generation = more cores/chip
 - ❖ Effect of lowering voltage and frequency → power reduction
 - ❖ Increasing cores/chip → performance increase



Better power performance!

ECE 4100/6100 (24)