

Performance Efficiency of μ architectures

Tech	Old μ Arch	mm (linear)	New μ Arch	mm (linear)	Area
1.0 μ m	i386C	6.5	i486	11.5	3.1
0.7 μ m	i486C	9.5	Pentium® proc	17	3.2
0.5 μ m	Pentium® proc	12.2	Pentium Pro proc	17.3	2.1
0.18 μ m	Pentium III proc	10.3	Pentium 4 proc	?	2+

Implications: (in the same technology)

- 1. New μ Arch ~ 2-3X die area of the last μ Arch**
- 2. Provides 1.4-1.7X integer performance of the last μ Arch**

We are on the Wrong Side of a Square Law
