

# Performance Efficiency of $\mu$ architectures

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

**Implications: (in the same technology)**

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

***We are on the Wrong Side of a Square Law***

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