

Lecture 02 (Evolution of Compilers)

1 Why Study Compilers?

1. Moore's law is dying
 - i. source to drain leakage
 - ii. limited gate material
 - iii. limited options for transistor material
2. PL abstractions are becoming higher level

1.1 S/W Improvements Made to Counter Moore's Law Decline

1. Single core \rightarrow multi-core
2. SIMD
3. Complex ISAs

1.2 Early Adoption of Compilers

1. The first language + compiler was developed in 1950s by John Backus
2. Compilers saw tremendous adoption by 1958