

# The x86 Feature Flags

On using the CPUID instruction  
for processor identification and  
feature determination

# Some features of interest

- In our course we focus on EM64T and VT
- A majority of x86 processors today do not support either of these features (e.g., our classroom and Lab machines lack them)
- But machines with Intel's newest CPUs, such as Core-2 Duo and Pentium-D 9xx, do have both of these capabilities built-in
- Software needs to detect these features (or risk crashing in case they're missing)

# Quotation

## NOTE

Software must confirm that a processor feature is present using feature flags returned by CPUID prior to using the feature. Software should not depend on future offerings retaining all features.

IA-32 Intel Architecture Software Developer's Manual, volume 2A, page 3-165