



THE PARALLEL BROWSER LAYOUT PIPELINE

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Browsing the Web on 1 Watt: Fast and Correct Webpage Layout from First Principles

Going Small Isn't Easy

SunSpider micro-benchmarks

MacBook Pro

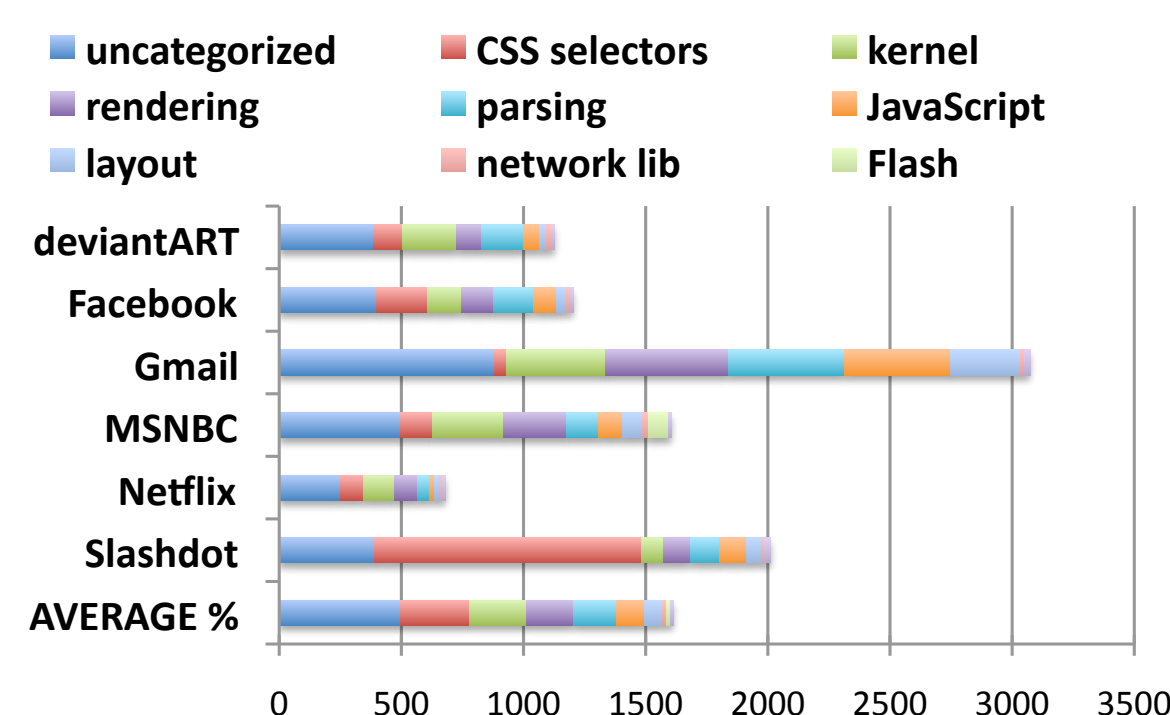
iPhone

3 seconds

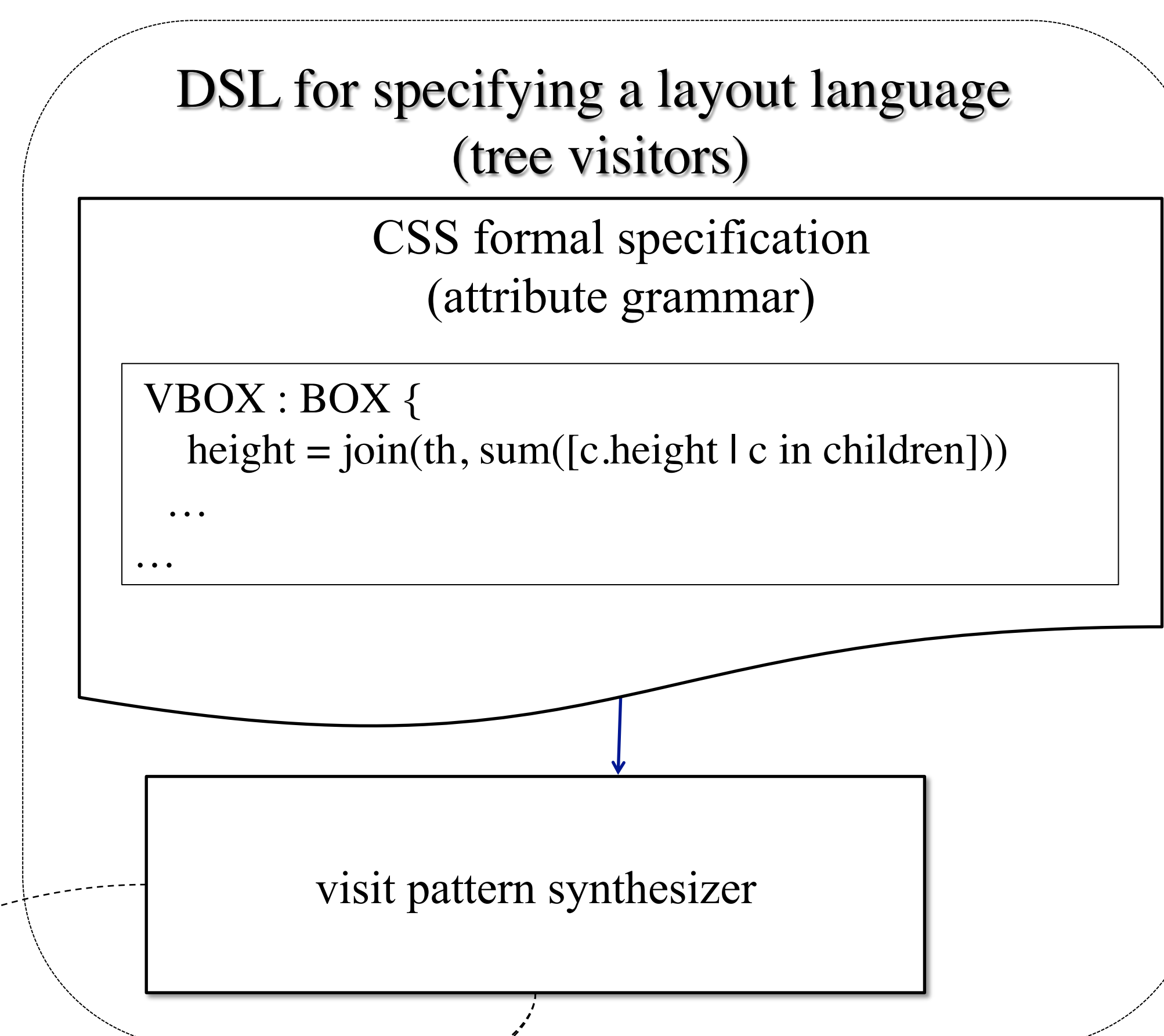
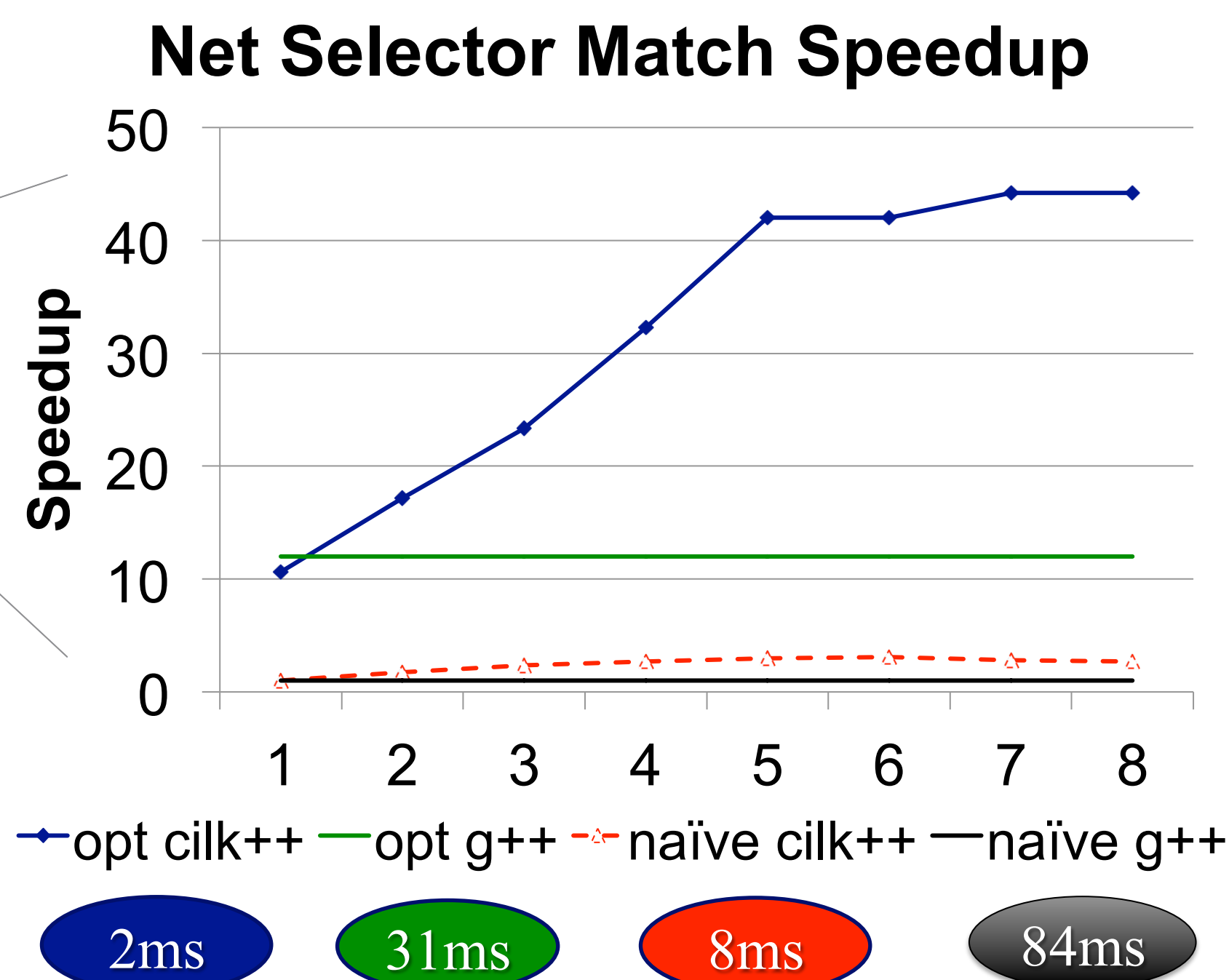
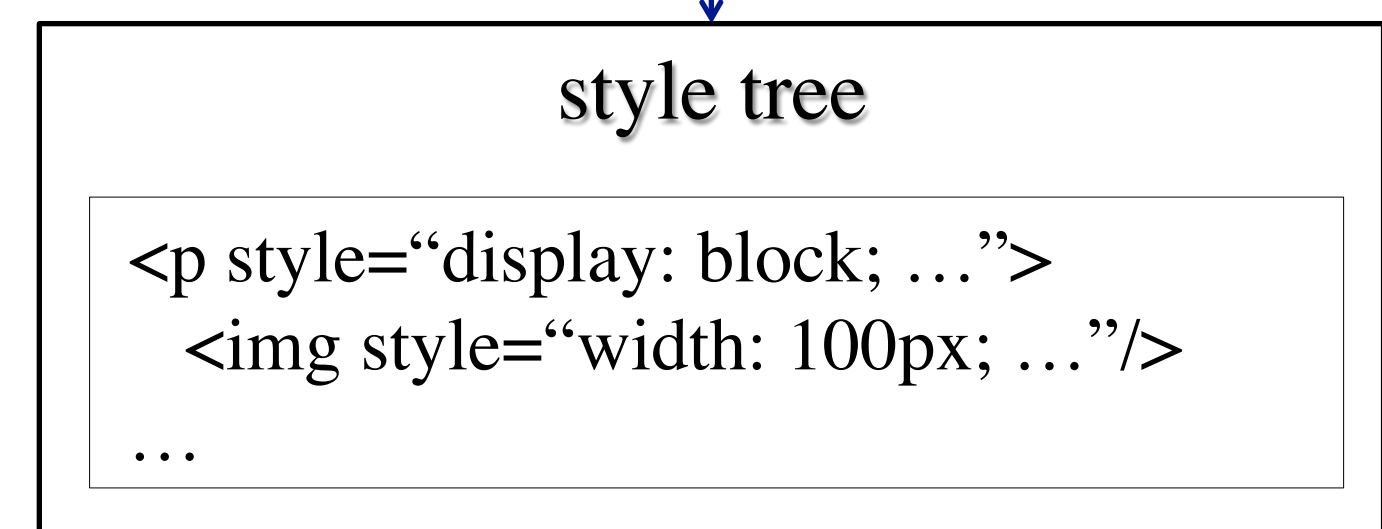
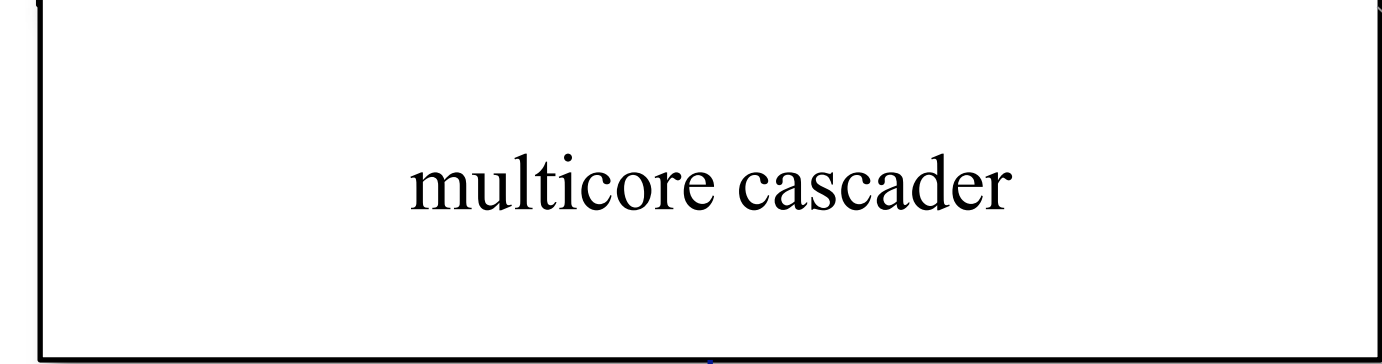
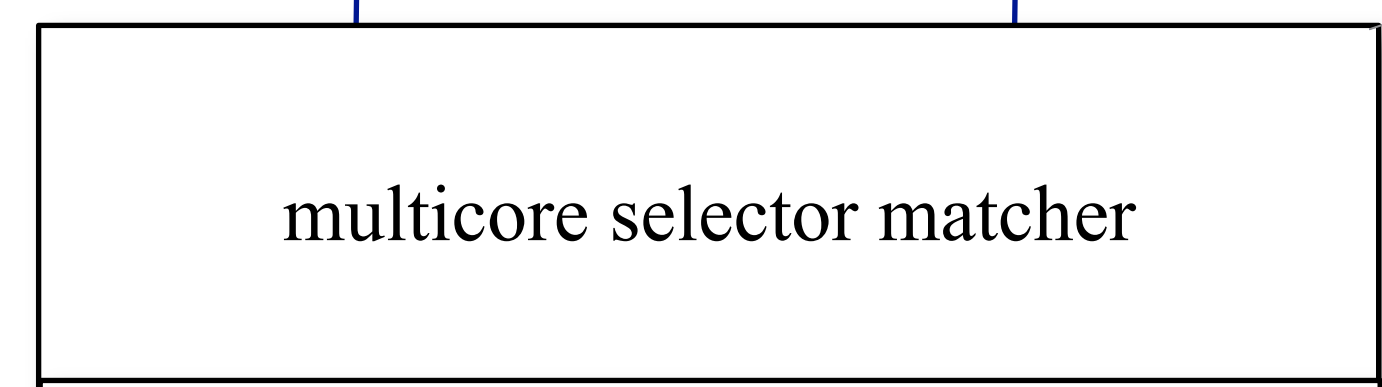
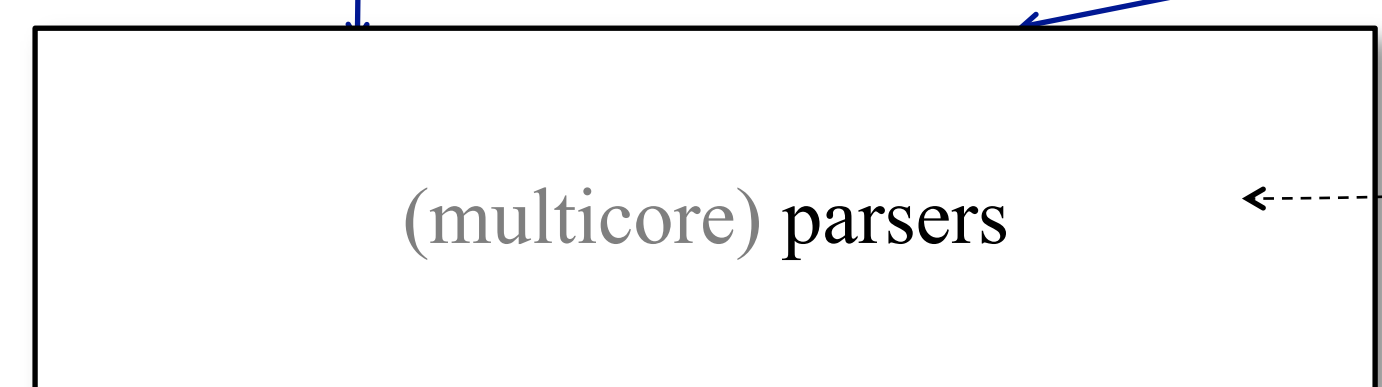
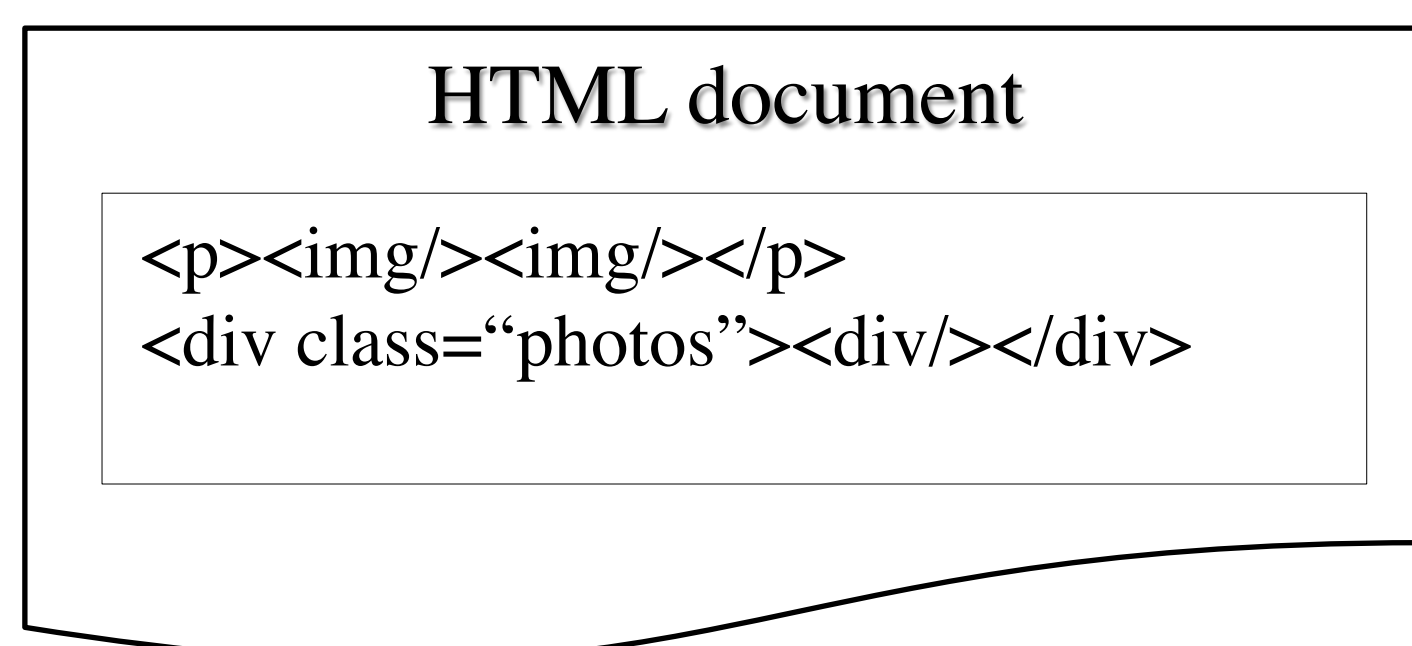
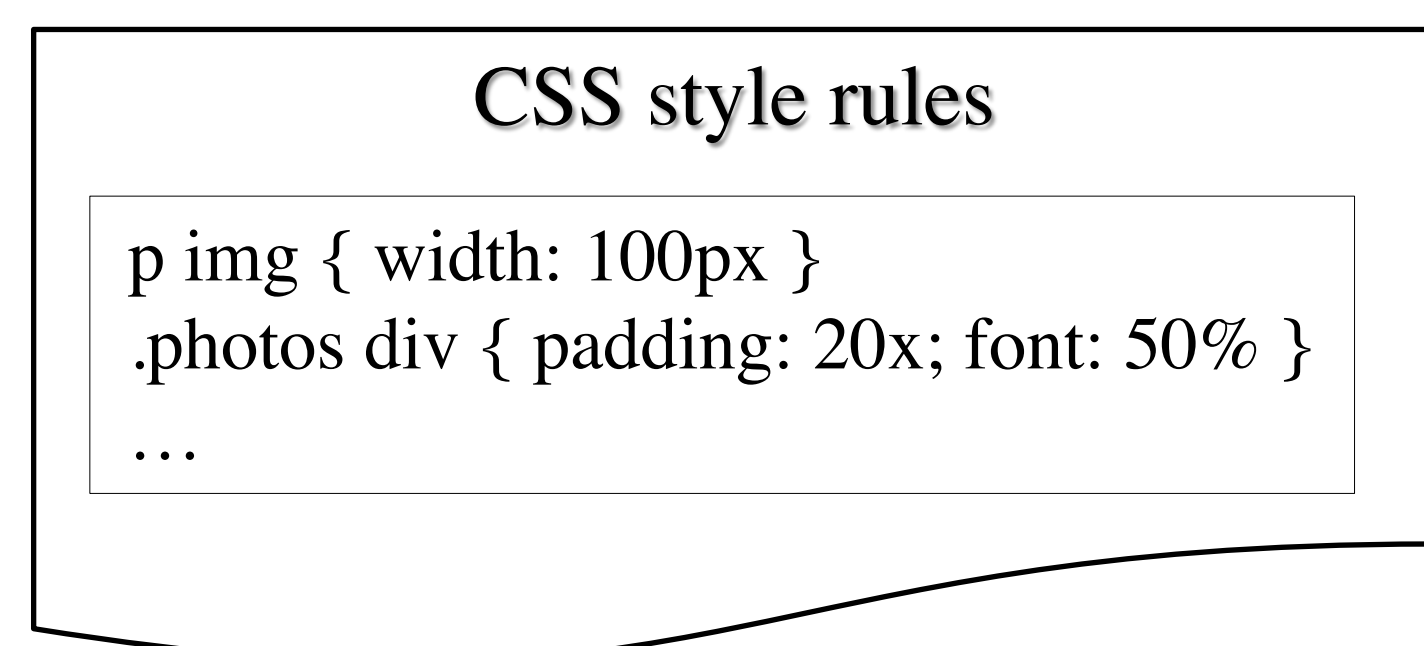
44 seconds

Browsers are CPU Bound

Page loading on Safari with a MacBook Pro



Parallel Layout Engine Design



- Next steps:**
- Tuning schedule selection
 - Value speculation
 - *Learning* semi-static work stealing parameters
 - DSL expressiveness extensions
 - Full CSS specification
 - SIMD tree visitors

