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Who says Java is not fast?!?

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Abstract

While performance tests actually show that for even core numerical calculations Java is at par with C in terms of speeds, and sometimes even hits Fortran-like speeds, people keep think that Java is not fast. I only invite you to test that yourself.

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While performance tests actually show that for even core numerical calculations Java is at par with C in terms of speeds, and sometimes even hits Fortran-like speeds, people keep think that Java is not fast. I only invite you to test that yourself.

Meanwhile, I would like to take the opportunity to advertise Noel's cinfony paper in CCJ (doi: 10.1186/1752-153X-2-24) which features these speed measurements (from the paper, CC-BY license):

Table 3 – Performance of Cinfony modules compared to a native Java or C++ implementation.

	Iterate over SDF		Iterate and calculate molecular weight	
CDK	Time (s)	Normalised	Time (s)	Normalised
Native Java	21.2	1.00	36.8	1.00
cdkjython	23.1	1.09	41.6	1.13
cdkjpype	33.0	1.57	69.5	1.89
OpenBabel				
Native C++	31.9	1.00	43.0	1.00
pybel	34.1	1.07	45.1	1.05
jybel	38.0	1.19	49.6	1.15
RDKit				
Native C++	99.7	1.00	100.7	1.00
rdkit	99.9	1.00	101.0	1.00

The times reported are wallclock times from the best of three runs on a dual-core Intel Pentium 4 3.2 GHz machine with 1GB RAM.

I have to say that these numbers surprised me, as the CDK is hardly optimized for speed at al...