

La transformation par la simulation numérique

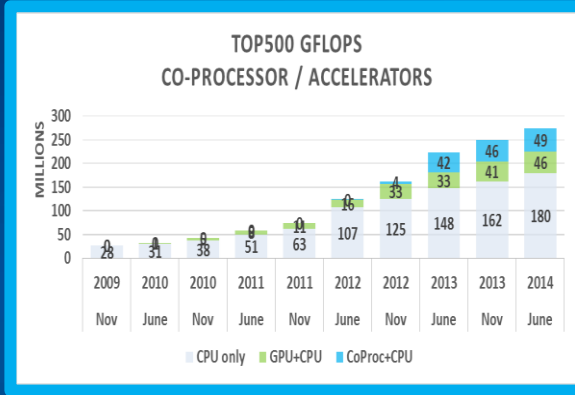
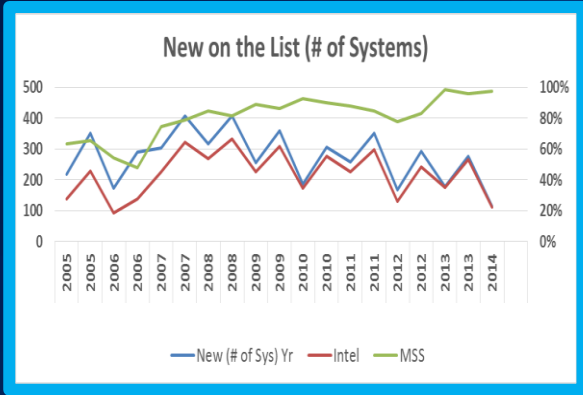
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June 2014



HPC TOP500 June 2014



Intel® Xeon Phi™
in Jun'14 list

#1—TOP500 system

#1—Intel® Xeon Phi™ Total Rmax > GPU's Total Rmax

427 of 500 (85%) of all systems
111 of 114 (97%) of new systems

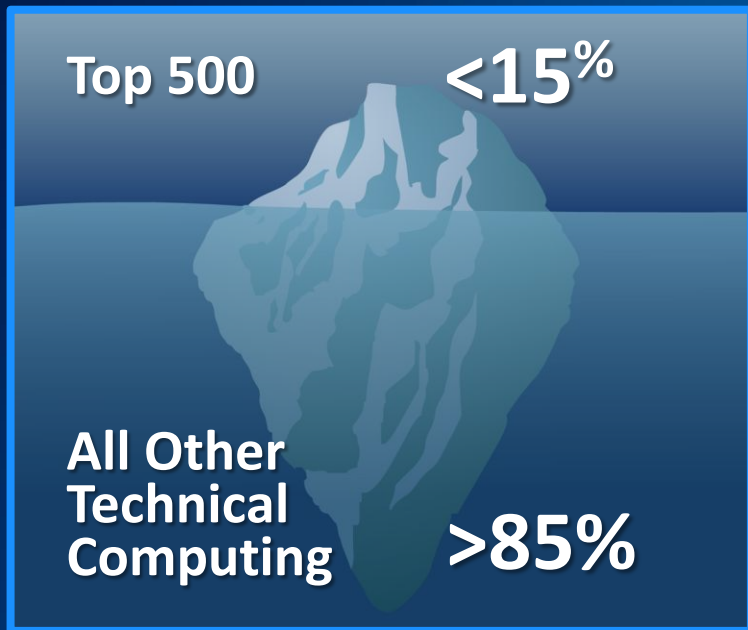
Use Intel processors

PRACE ISC Award—2014

1st Sustained 1PFlop Real Science Performance on an IA-based System



Technology Waterfalls from the Top



% of sockets sold

*Performance Waterfall**

#1 Top500 System to Single Socket

6-8 years

#1 to #500

~9 years

#500 to Single Socket

**plus.....similar waterfalls for other capabilities in areas like fabrics, storage, software, ...*

Source: Top500.org and Intel Estimate of Top500 sockets as % of sum of analysts reports of HPC and branded Workstations sockets. Performance waterfall timelines based on TOP500.org statistics (#1-#500) and Intel estimate (#500 to projected Intel Knights Landing)
Other brands and names are the property of their respective owners.



AMBER WRF VISIT VASP UTBENCH SU2 SG++ SeisSol, GADGET, SG++ ROTOR SIM R Quantum Espresso Optimized integral OPENMP/ MPI Openflow NWChem

AVBP (Large Eddy)

NEMO5

MPAS

Blast

Mardyn

BUDE

MACPO

CAM-5

Ls1

CASTEP

Harmonie

Castep

GTC

CESM

GS2

CFSv2

Gromacs

CIRCAC

GPAW

Modernizing Community Codes... *Together*

Intel® Parallel Computing Centers

Plus... User Groups Forming

CLiPhi (COSMOS)

COSA

Cosmos codes

DL-MESO

DL-Poly

ECHAM6

Elmer

FrontFlow/Blue Code

GADGET

GAMESS-US

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