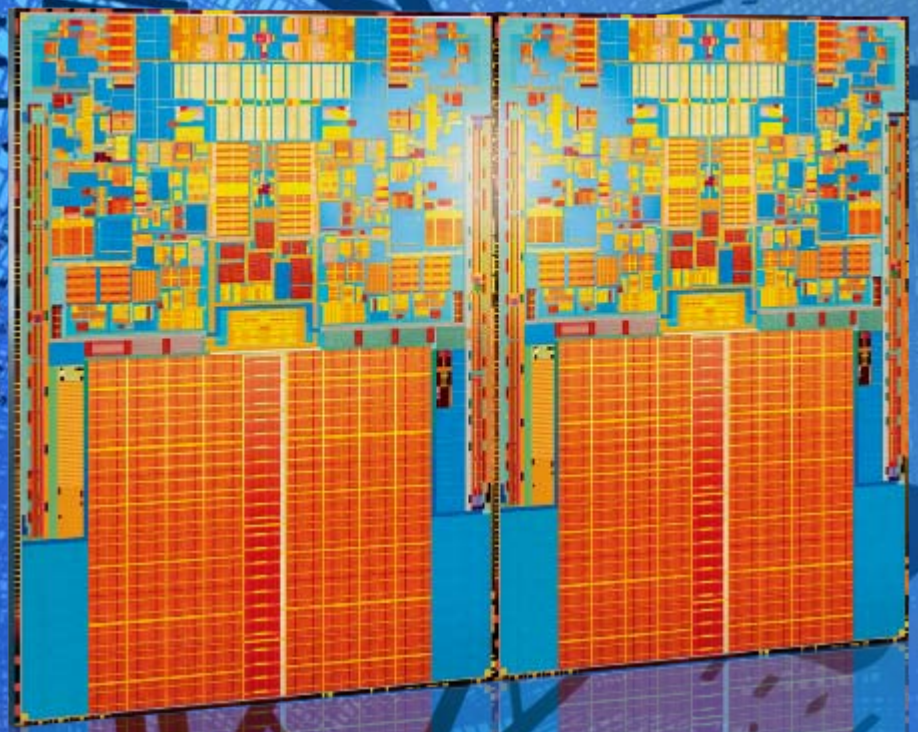

World's 1st 45 nm, High-K Processor Launch

Nov 13, 2007

Today's Agenda

- **Introduction** by Alex Lenke, Intel Investor Relations
- **Importance of Technology for Wall Street** by Special Guest Speaker - Phil Marie, NASDAQ SVP & President of Network and Web Operations
- **45nm Silicon Technology** by Mark Bohr, Intel Senior Fellow & Technology and Mfg Group Director, Process Architecture and Integration
- **Launching Intel's 45 nm High-K Processors** by Diane Bryant, Intel VP, Digital Enterprise Group, Director, Server Products Group
- **Collaborating with Wall Street** by Daryan Dehghanpisheh, Intel Enterprise Account Manager, Financial Services
- **Q&A** (with Intel speakers)
- Demos (in back of room)

Risk Factors

- Today's presentation contains forward-looking statements. All statements made that are not historical facts are subject to a number of risks and uncertainties, and actual results may differ materially. Please refer to our most recent Earnings Release and our most recent Form 10-Q or 10-K filing available on our website for more information on the risk factors that could cause actual results to differ.

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Intel 45 nm Silicon Technology

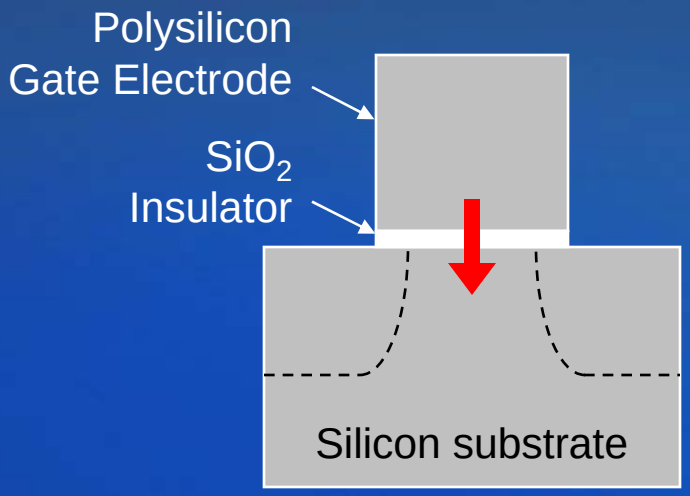
Mark Bohr

Intel Senior Fellow

Logic Technology Development

Transistor Scaling Challenges

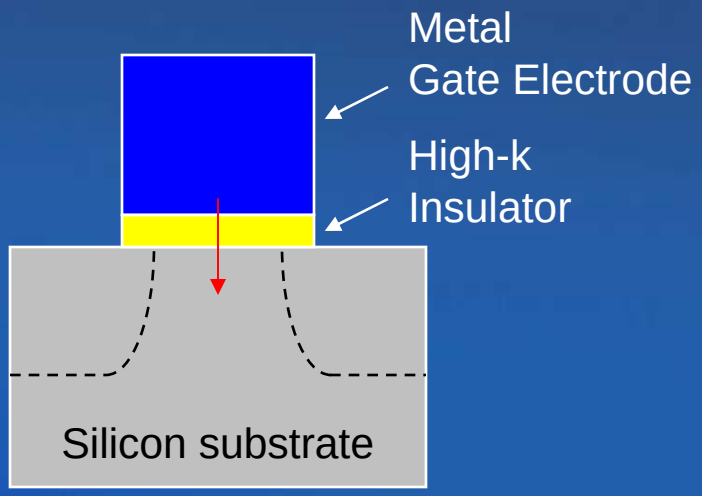
Standard Transistor



Transistor scaling limited by SiO_2 gate insulator

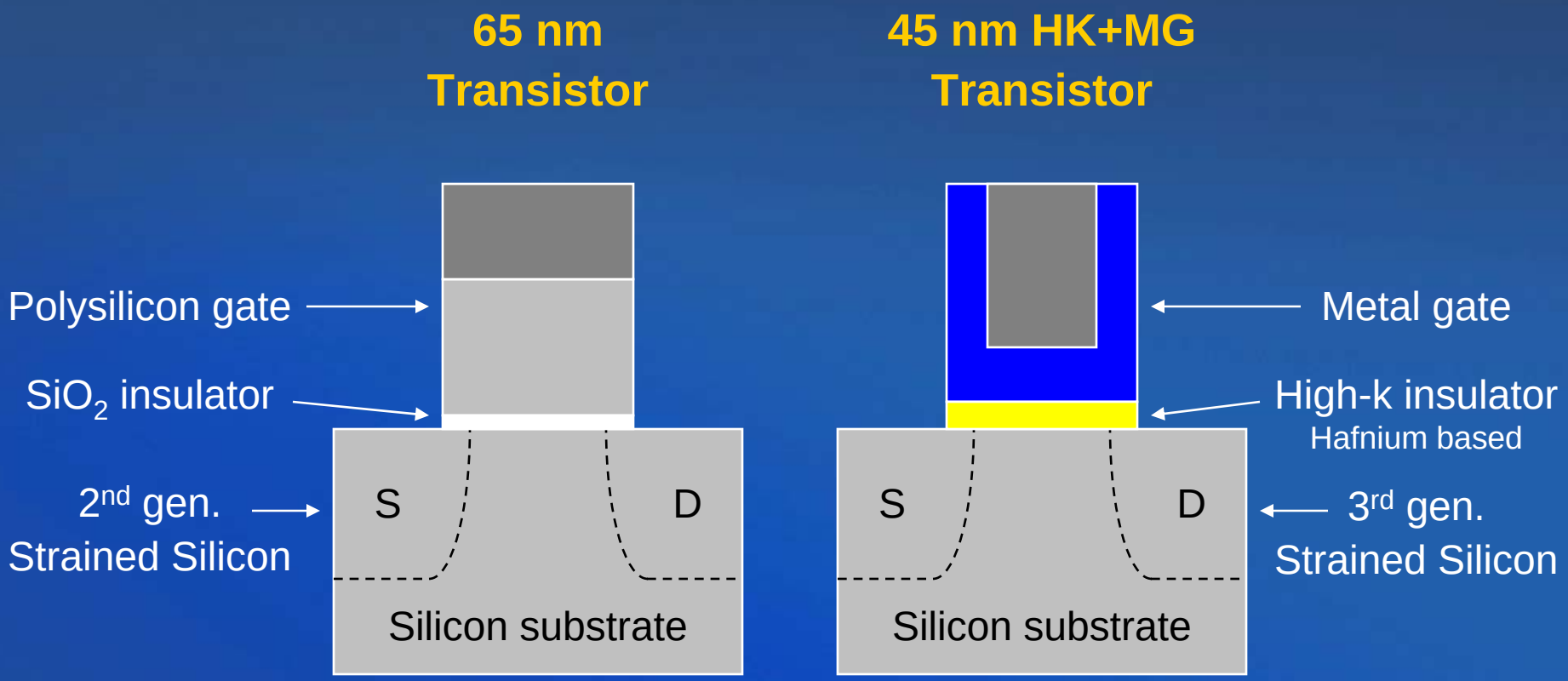
Further SiO_2 scaling results in excessive gate leakage

High-k + Metal Gate



High-k + metal gate reduces gate insulator leakage and improves performance

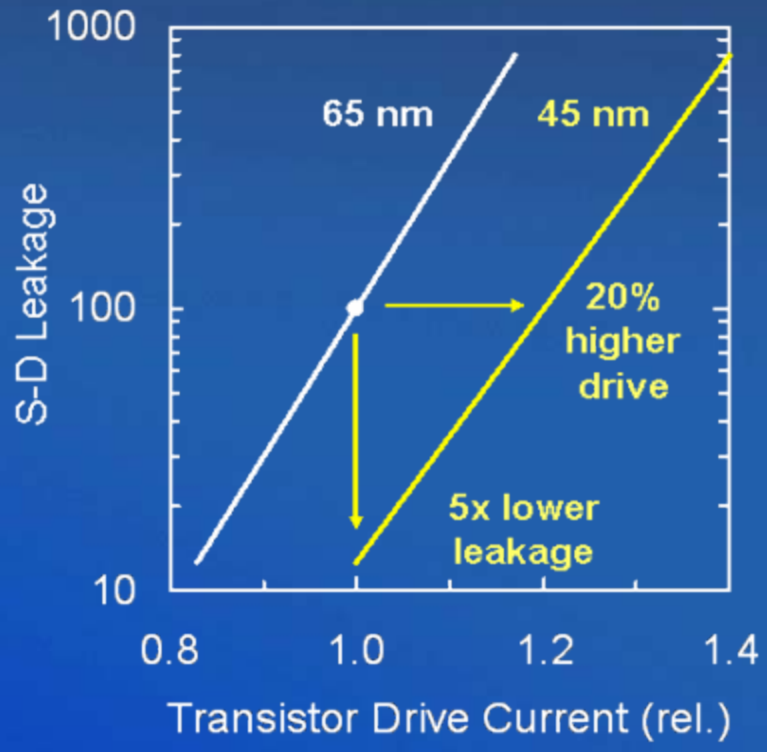
Fundamental Change to Transistors



Delivering Real Perf/Watt Improvement

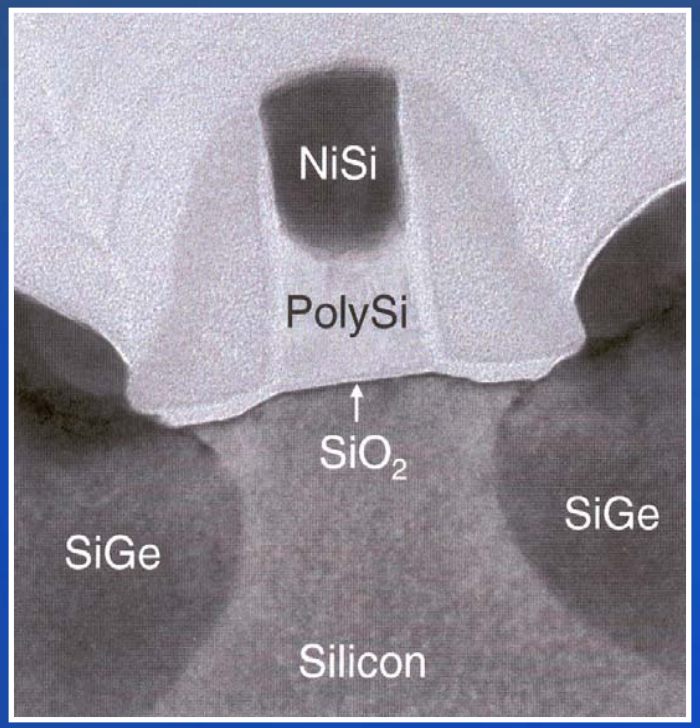
45 nm High-k + Metal Gate
Performance / Watt Benefits

- >10x lower gate insulator leakage
- >30% lower switching power
- >20% higher drive current, or
- >5x lower source-drain leakage

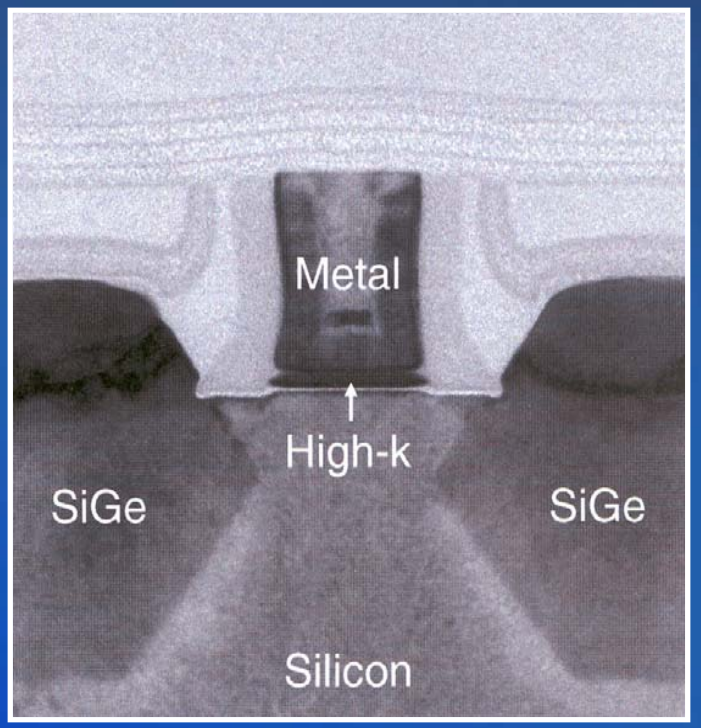


High-k + Metal Gate Transistors

65 nm Transistor



45 nm HK + MG



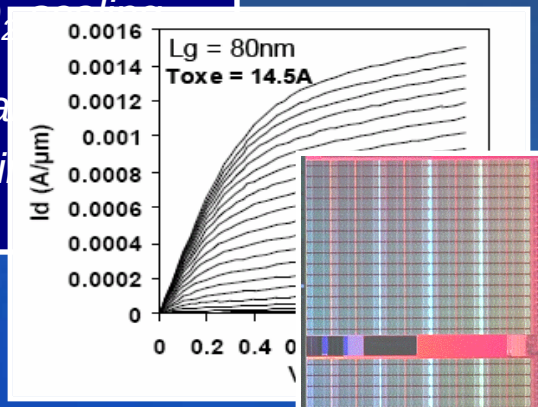
Hafnium-based high-k + metal gate transistors are the biggest advancement in transistor technology since the late 1960s

The Road to 45 nm HK + MG

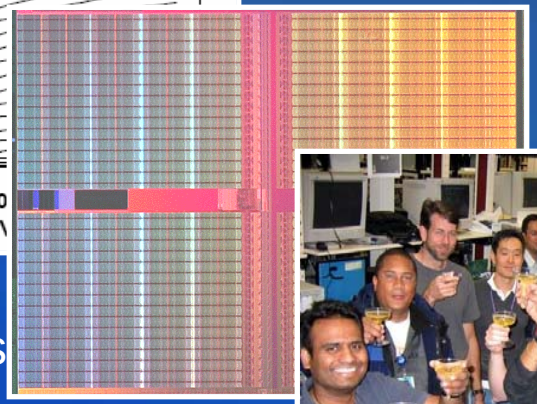
Intel foresees
end of SiO_2 scaling

High-k tra
research i

Mid-1990s
Research Starts

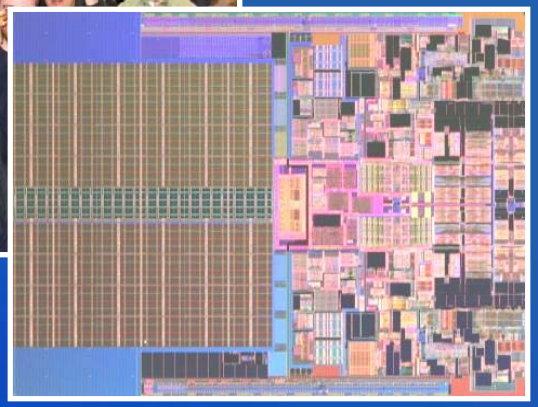


Nov. 2003
HK+MG Transistors



Jan. 2006
153 Mb SRAM

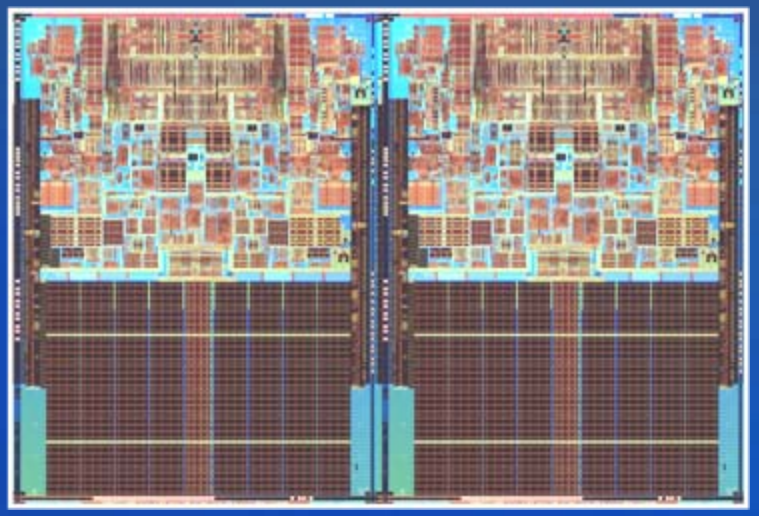
Jan. 2007
Penryn 1st Silicon



Nov. 2007
Penryn Launch

An Optimized Application of Moore's Law

Intel® Xeon® 5300 Processor
(Clovertown)
65 nm



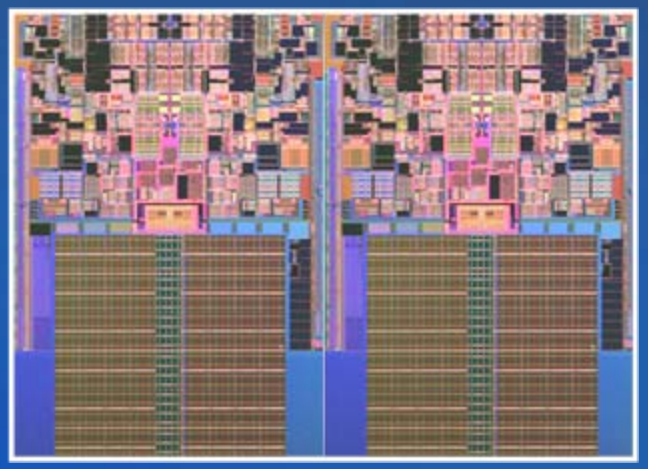
143 mm²*

143 mm²*

582M Transistors
8 MB Cache

1.9x
transistors/mm²

Intel® Xeon® 5400 Processor
(Harpertown)
45 nm Hi-k



107 mm²*

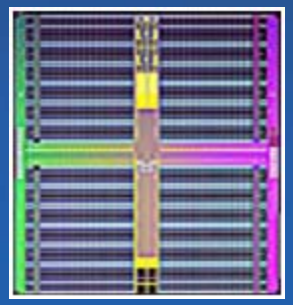
107 mm²*

820M Transistors
12 MB Cache

*source: Intel

On-Time 2 Year Cycles

130 nm	90 nm	65 nm	45 nm	32 nm
2001	2003	2005	2007	2009*



291 Mbit SRAM

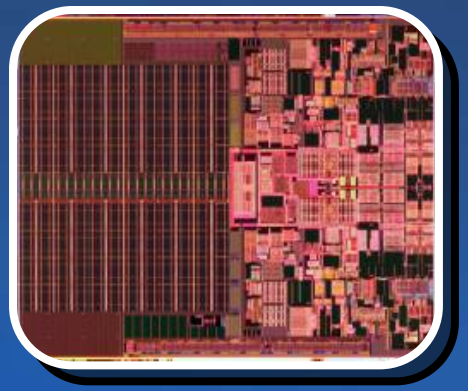
2nd gen. HK+MG

Sep. 2007

*Forecast

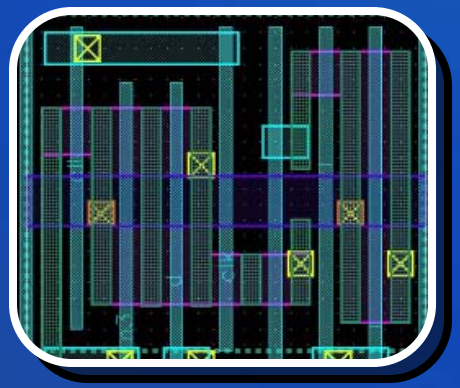
In-House Co-Optimization

Process

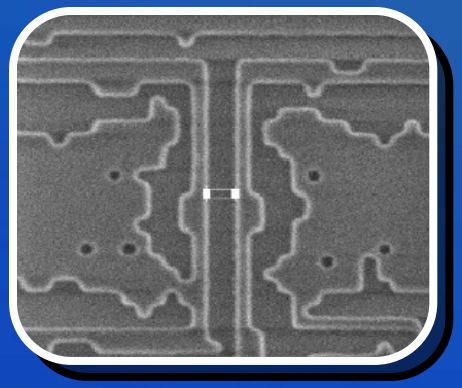


Product

Leading-edge Capacity



Design Tools

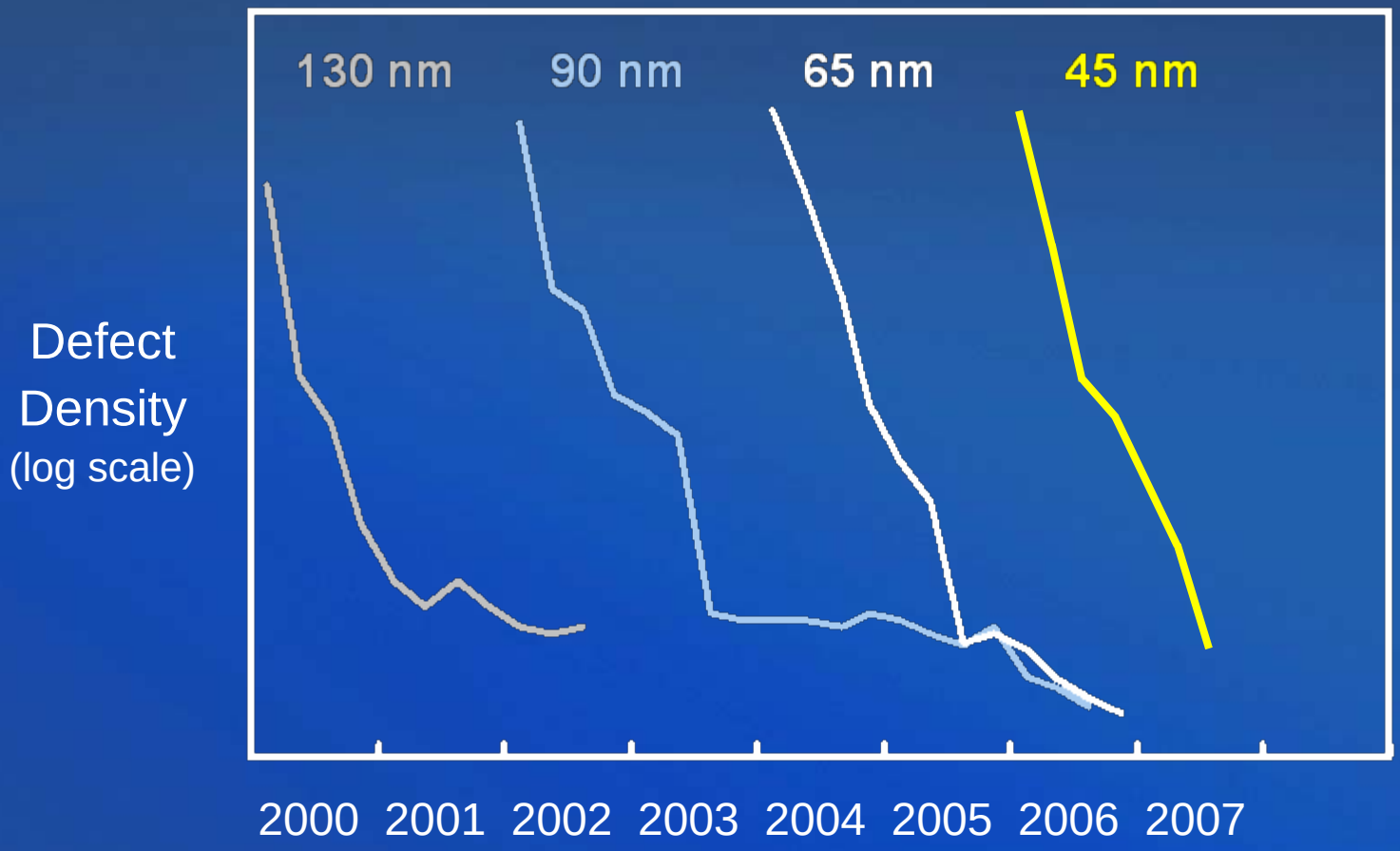


Masks

Packaging

Design-For-Manufacturing enables rapid yield learning

Rapid Defect Reduction for High Chip Yield



45 nm Manufacturing Fabs

D1D Oregon - Now

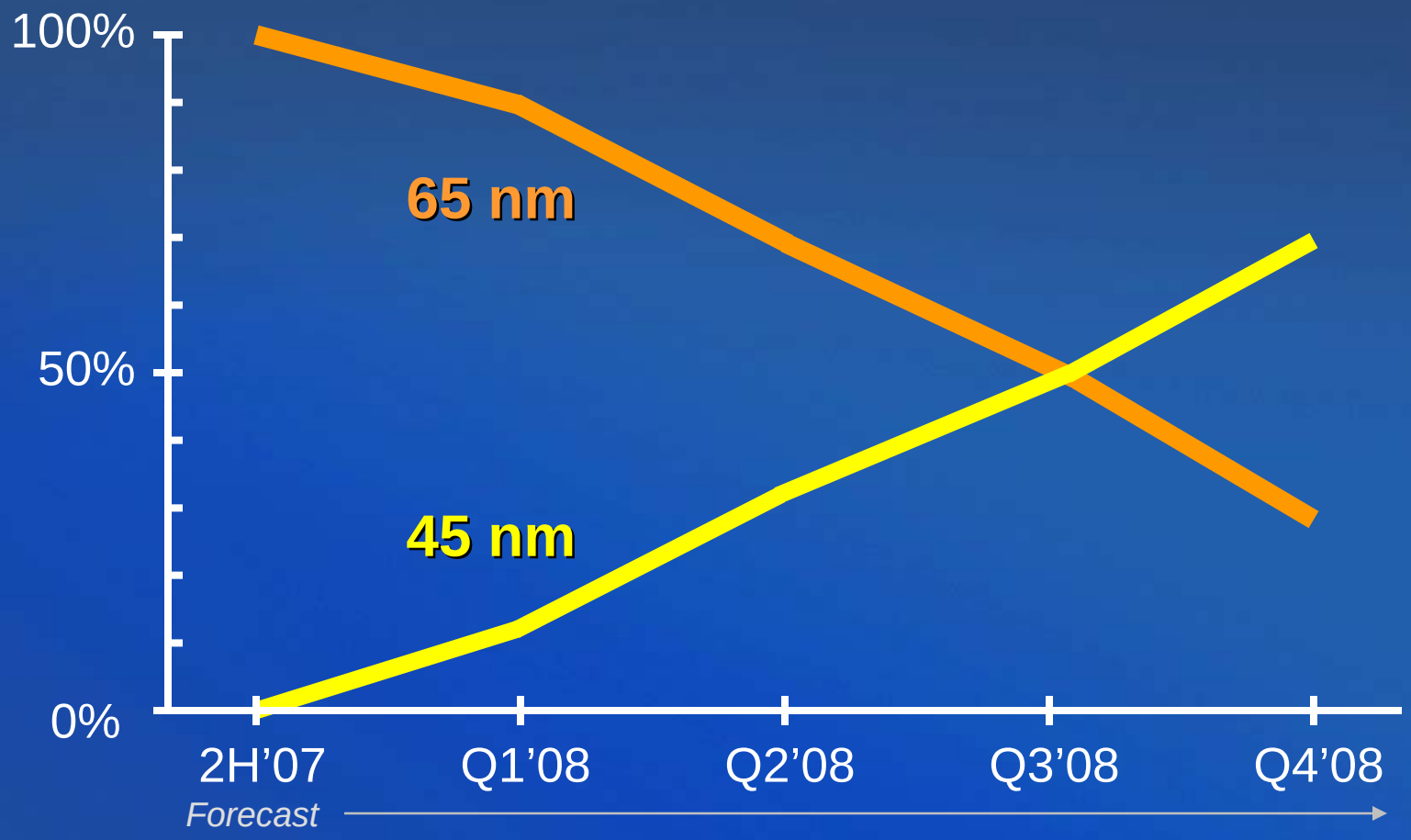
Fab 32 Arizona - Now

Fab 28 Israel – 2008*

Fab 11X New Mexico – 2008*

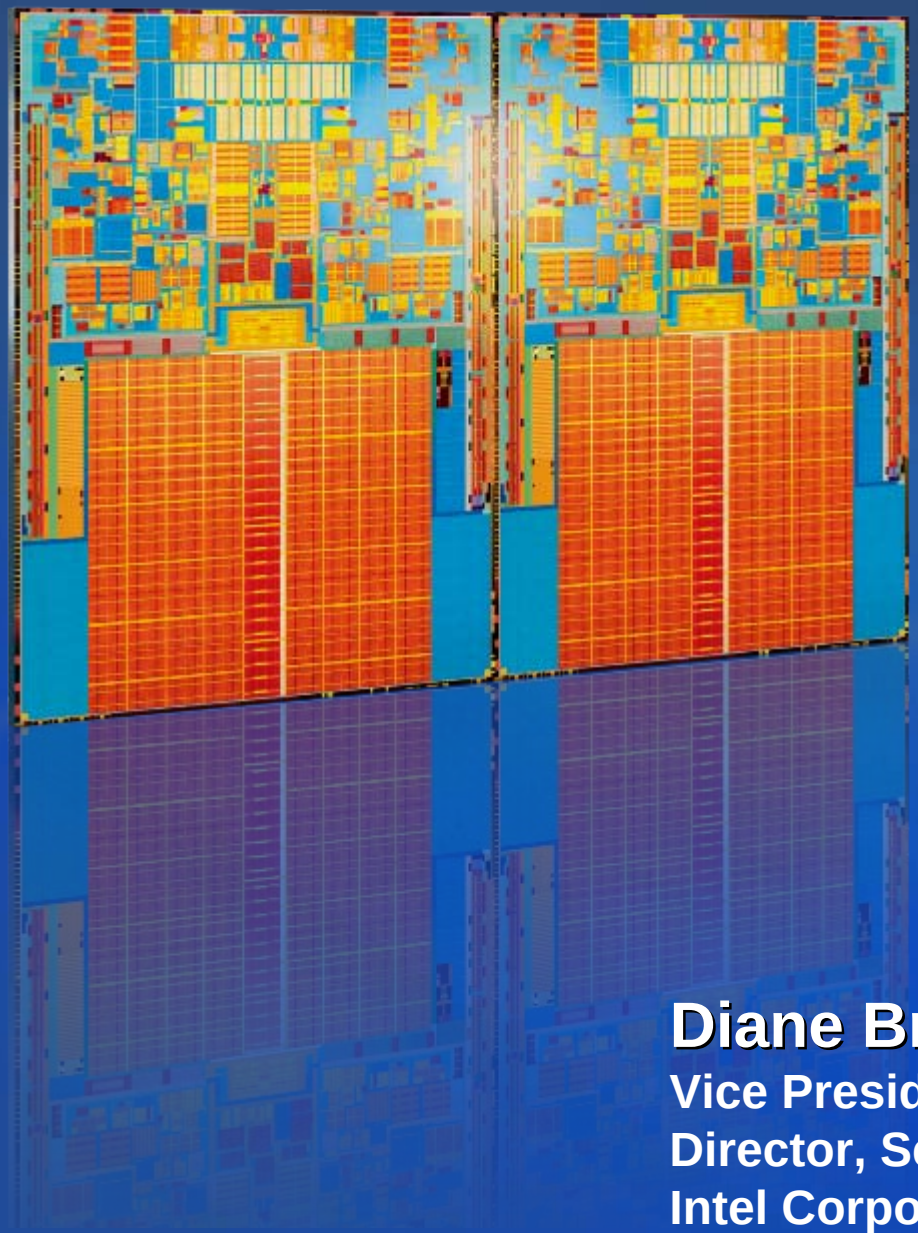
*Forecast

CPU Shipment Crossover



Intel 45 nm CPU shipments expected to crossover 65 nm in Q3'08

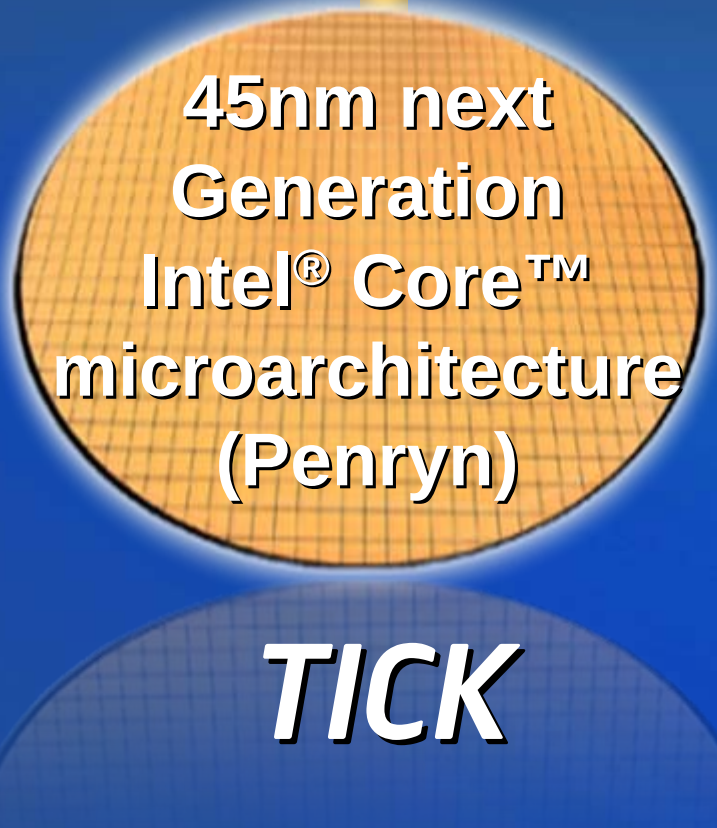
Source: Intel Internal



Intel's 45 nm High-K Processors

Diane Bryant
Vice President
Director, Server Products Group
Intel Corporation

Key Messages



- Execution to the Tick-Tock model continues
- Intel 45nm next generation Intel® Core™ microarchitecture extends the lead
- Delivering new segment-optimized platforms

New 45nm High-k Processors

Intel's 2nd Generation quad-core processor

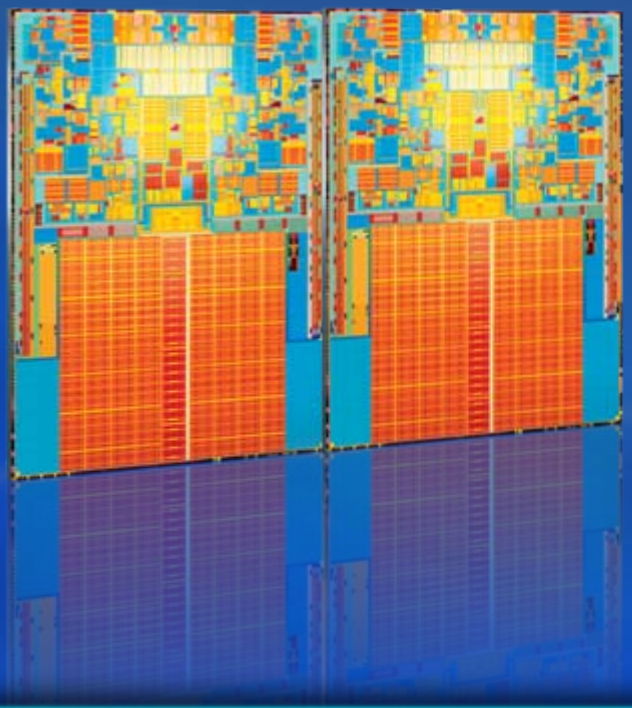
Technology Rich

Enhanced Intel Core Microarchitecture

Larger Caches

New SSE4 Instructions

45nm High-k & Metal Gates Technology



Compelling IT Benefits

Greater Performance at Given Frequency and Higher Frequencies

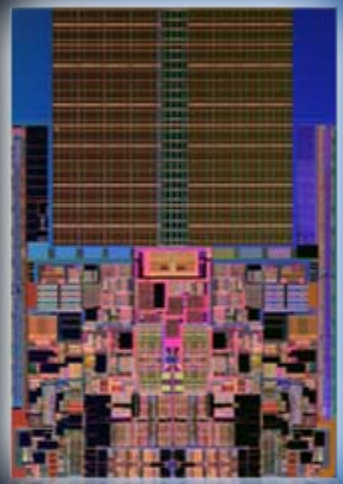
Greater Energy Efficiency

The Next "Tick" Delivering Higher Performance & Energy Efficiency

Enhanced Intel® Core™ Microarchitecture

Intel® Core™ Microarchitecture	Enhanced Intel Core Microarchitecture
Intel® Wide Dynamic Execution	Fast Radix-16 Divider Improved Virtualization Technology
Intel® Advance Smart Cache	50% Larger on die Cache 24 Way Associativity
Intel® Smart Memory Access	Improved Store & Forwarding Higher Bus Speeds
Intel® Adv Digital Media Boost	Intel® SSE4 Instructions Fast Super Shuffle Engine
Intel® Intelligent Power Capability	Deep Power Down Technology* Enhanced Intel Dynamic Acceleration*

Intel® HD Boost



Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

*Mobile only features

A Family of 45nm Processors

Server

Quad-Core Intel Xeon® *5400* processors
Available: Nov 12, '07

Dual-Core Intel Xeon® 5200 processors (DP)
- Available: Dec '07

UP Intel Xeon® processors
- Available: Q1'08

Dunnington (MP)
- Available: 2H'08

Desktop

Intel® Core™ 2 Extreme processor QX9650
- Available: Nov 12, '07

Intel Core 2 Quad processor
- Available 1Q '08

Intel Core 2 Duo processor
- Available: 1Q'08

Mobile

Intel Core 2 Extreme processor
- Available: 1Q'08

Intel Core 2 Duo processor
- Available: 1Q'08

45 nm Products Ship in All Segments by '08

All products, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice.

Introducing Intel® Core™2 Extreme QX9650 Quad-Core Processor

Intel's 2nd Generation Quad-Core Processor on 45nm Technology

"Fastest high-end desktop chip on the market…"

- CNET Reviews, 10/07

"… benefits a startlingly broad range of applications, from games to office apps and scientific computing."

- Techreport, 10/07

"Simply the fastest processor for gaming, media encoding and just about anything else you could do on your PC.

- PC Perspective, 10/07

"… simply the fastest desktop CPU on the market today."

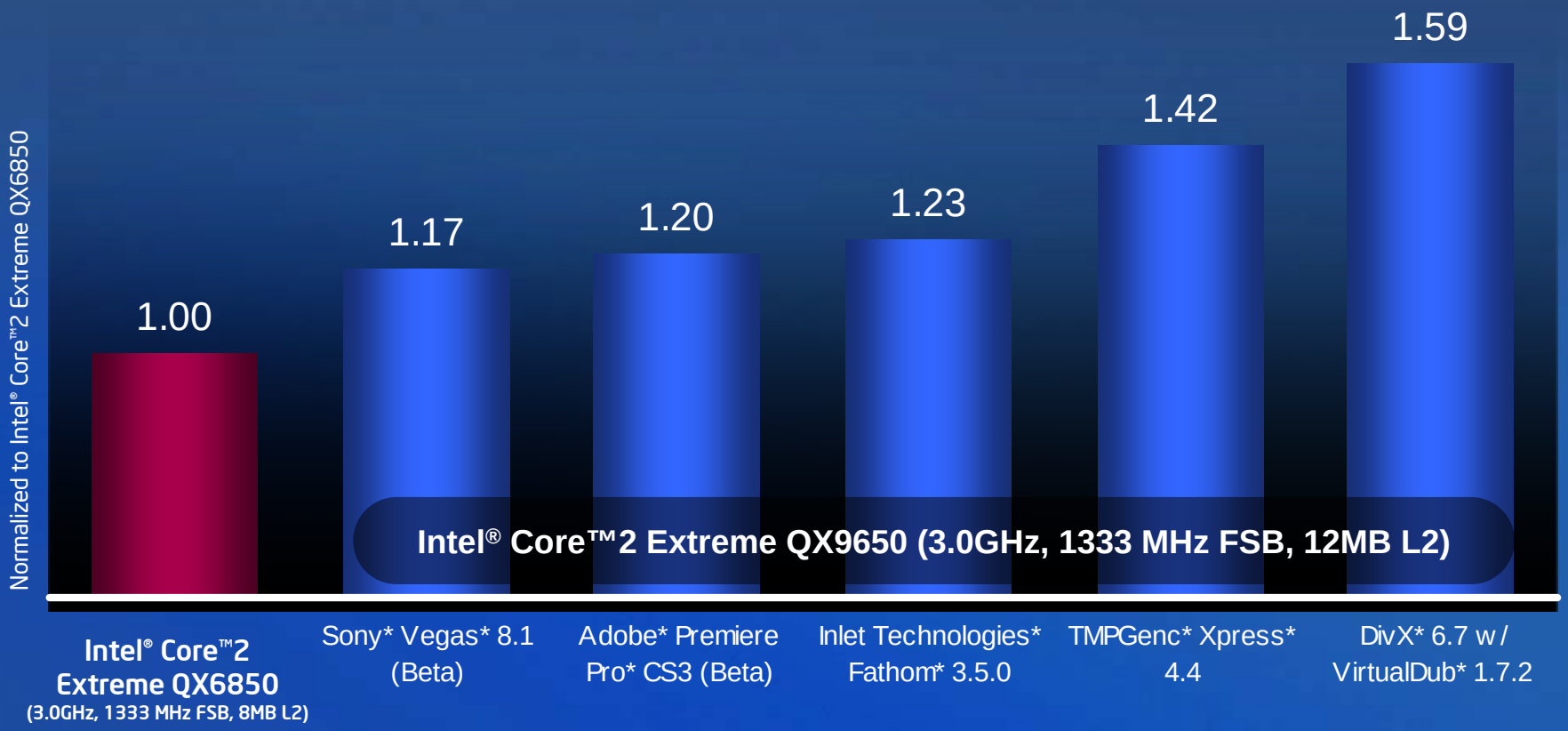
- Extremetech, 10/07

"Less noise, more efficiency, more speed, and more overclocking potential."

- Tom's Hardware, 10/07

The Ultimate Engine for Advanced Multimedia & Gaming

3.0GHz Quad-Core Performance Video Encoders[1] Featuring Intel® HD Boost



Intel® HD Boost On The New Intel® Core™2 Extreme QX9650 Processor Turbo Charges Video Encoding & Editing

[1]SSE4.1 support in DivX*6.7 is experimental. Adobe* Premiere Pro* CS3 performance data from a Beta/pre-release of the software. Data is subject to change.

Source: Intel. **Configuration**: Intel® Core™ 2 Extreme QX6850 (8MB L2, 3.0 GHz, 1333MHz FSB) and Intel Core™2 Extreme Processor QX9650 (12MB L2, 3.0 GHz, 1333MHz FSB) on Asus* P5E3 X38 Deluxe board, Intel Chipset INF 8.4.0.1016, Asus* EN8800GTX with nVidia* 8800GT graphics card, 2x1GB Dual Channel Corsair* DDR3-1333 9-9-9 -24, Seagate* 320GB Barracuda* NCQ Serial ATA 7200 RPM, Windows* Vista* Ultimate 32bit. *Performance tests and ratings are measured using specific computer systems and / or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit http://www.intel.com/performance/*

New Server Platforms for 45nm

Stable Platform
5 generations of Multi-core in the same platform

Refresh

(Intel® 5000 chipset)

HPC Performance
Bandwidth Optimized for High Performance Analytics

New

(Intel® 5400 chipset)

Entry Business Servers
Cost & Power Optimized Reliable Business Servers

New

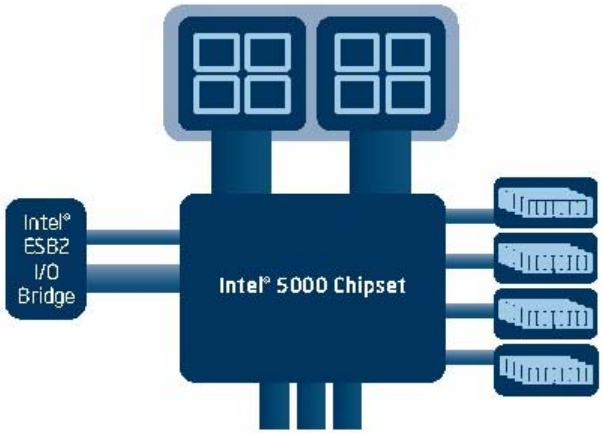
(Intel® 5100 chipset)

(Intel® 3200 chipset)

Diverse Business Requirements Drive the Need for Optimized Platforms

More Performance in the Stable Platform

Platform of Choice Since Mid'06 adding 45nm processors



Common 2P Server Infrastructure

Dual-Core Xeon 5000	Dual-Core Xeon 5100	Quad-Core Xeon 5300	**NEW** 45nm Quad-Core Dual-Core

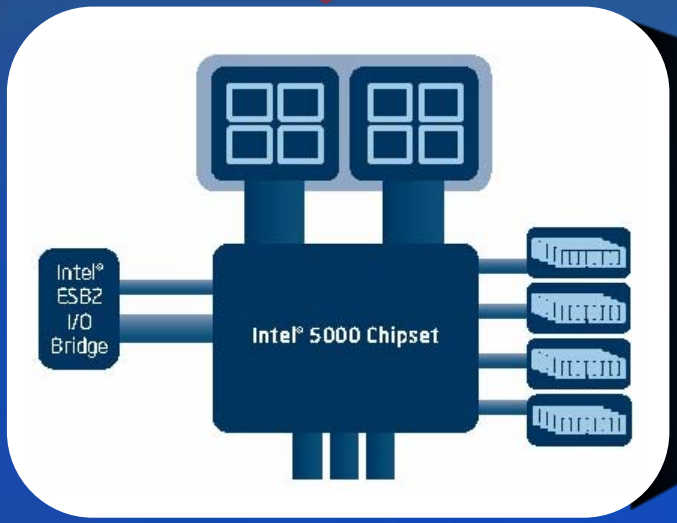
Socket compatible, software compatible, stable power envelope

More Performance in a Stable Platform

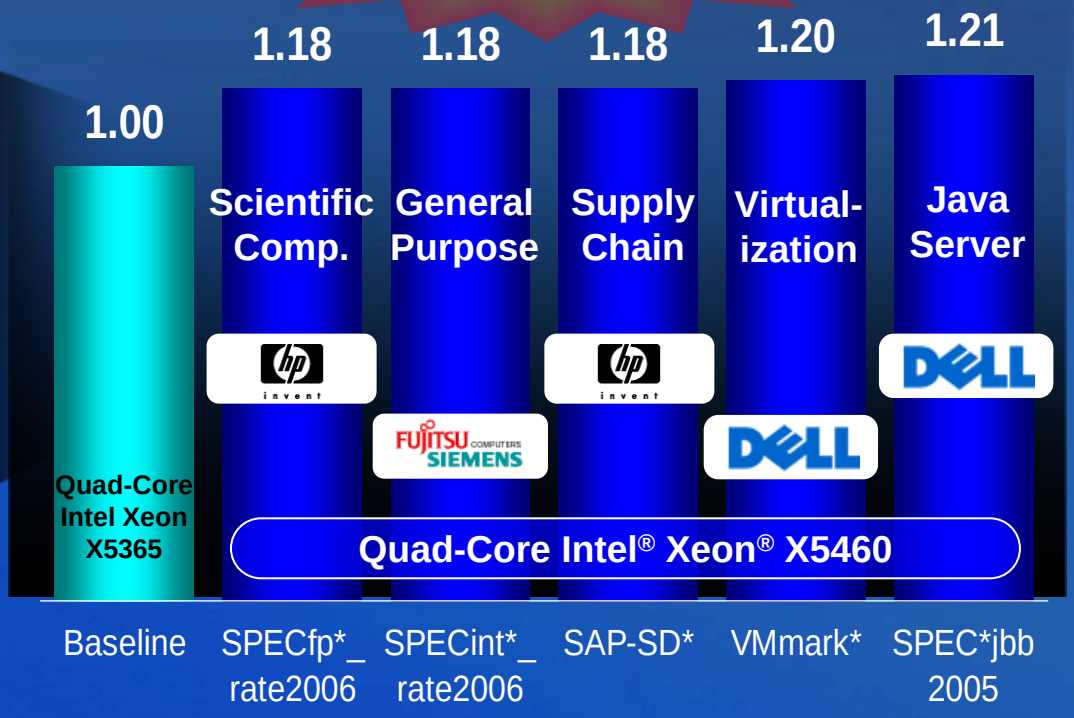
Data source: Published/Measured results as of Oct 2, 2007. See backup for details

More Performance in the Stable Platform

Platform of Choice Since Mid'06 adding 45nm processors



Up to 21% Higher Performance



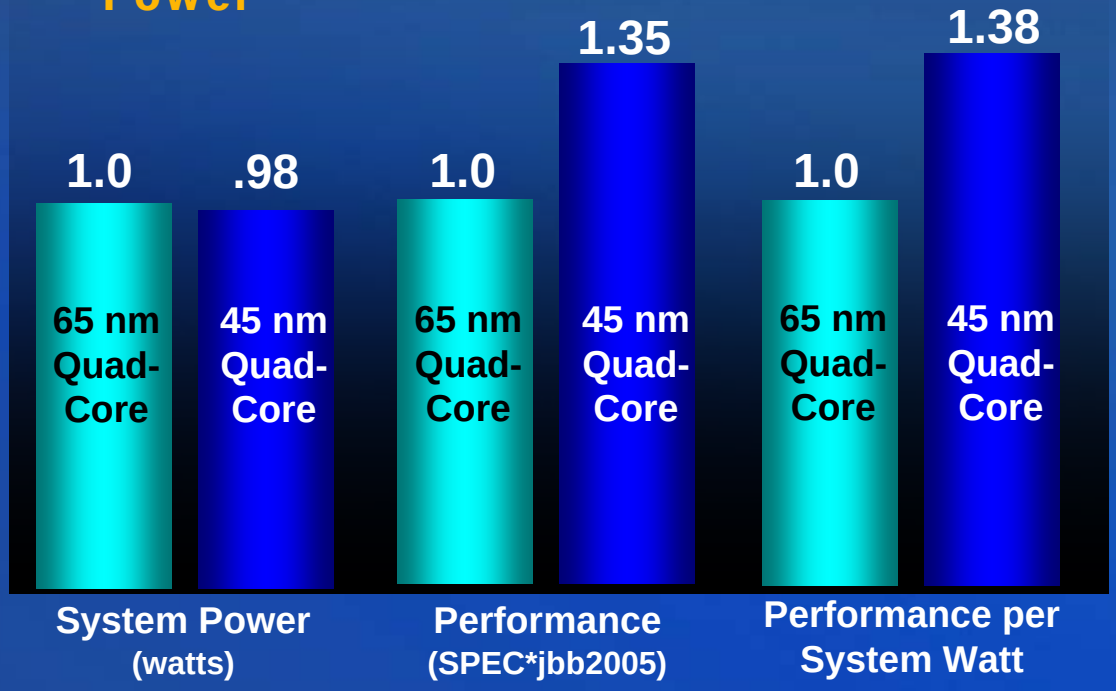
More Performance in a Stable Platform

Data source: Published/Measured results as of Oct 2, 2007. See backup for details

Energy Efficient Performance

Up to 38% Higher Performance/Watt

Stable System Power + Higher Performance = Higher Perf/Watt



Leverages 45nm High-k & Metal Gate Low Leakage Technology

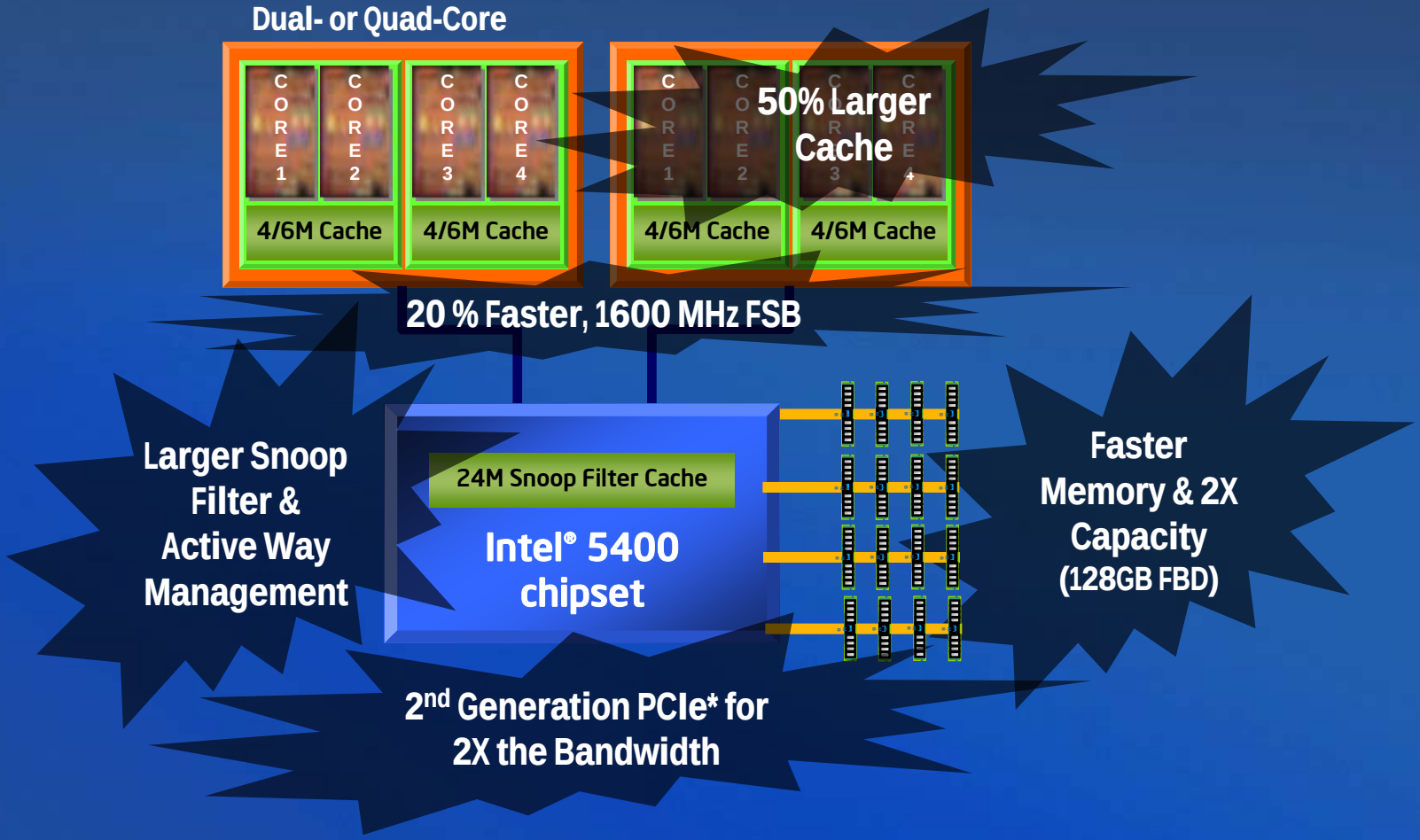
Up to 2/3 Reduction in Idle Power

Choice of Processor Power Levels, including 50W Quad-Core[1]

1 – 50W Quad-Core available in Q1'08, all dates and features are subject to change without notice

Data source: Published/Measured results as of Oct 2, 2007. See backup for details

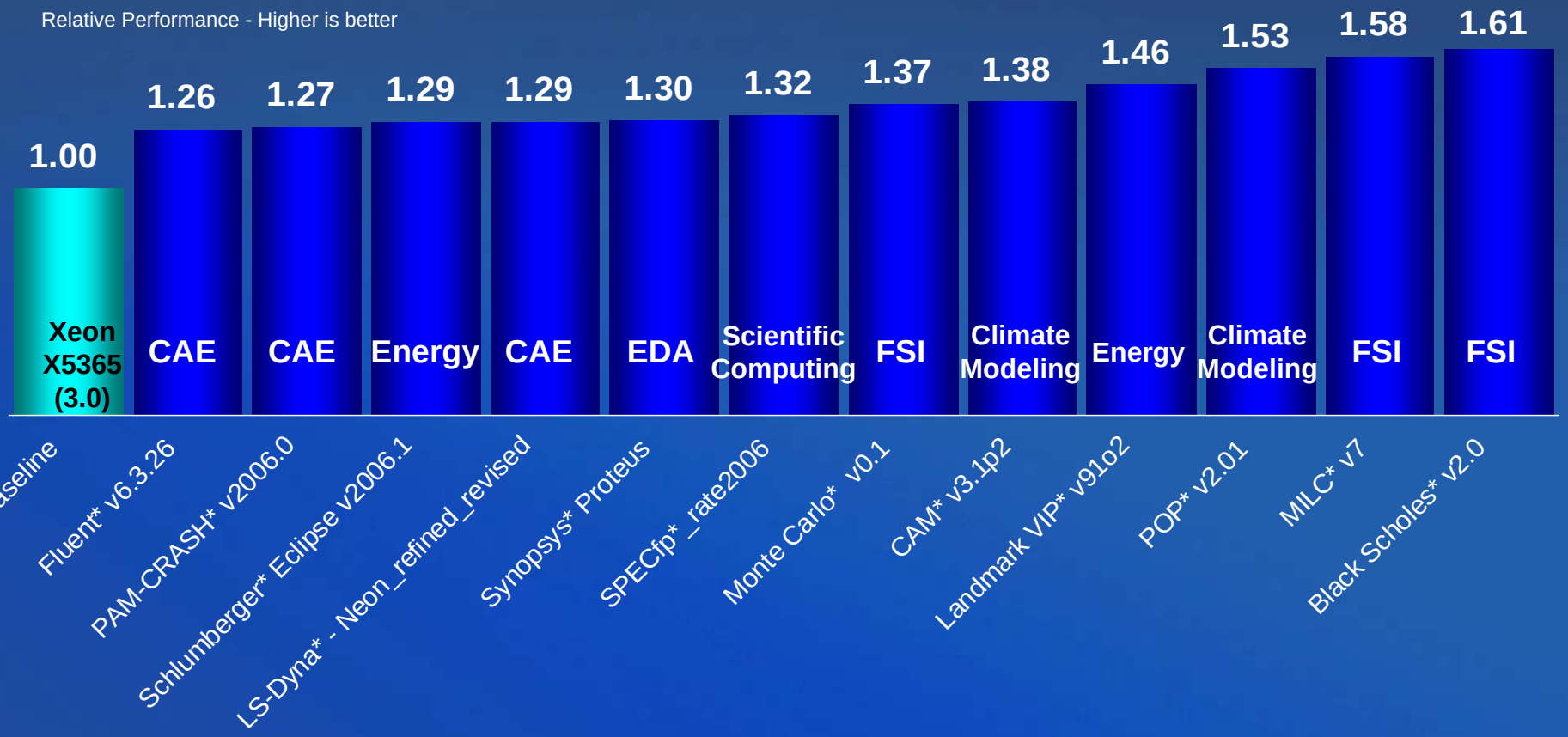
New Platform Optimized for the Performance Demanding HPC Segment



Improved Platform for bandwidth Intensive Apps

Added Bandwidth Translates into HPC Performance

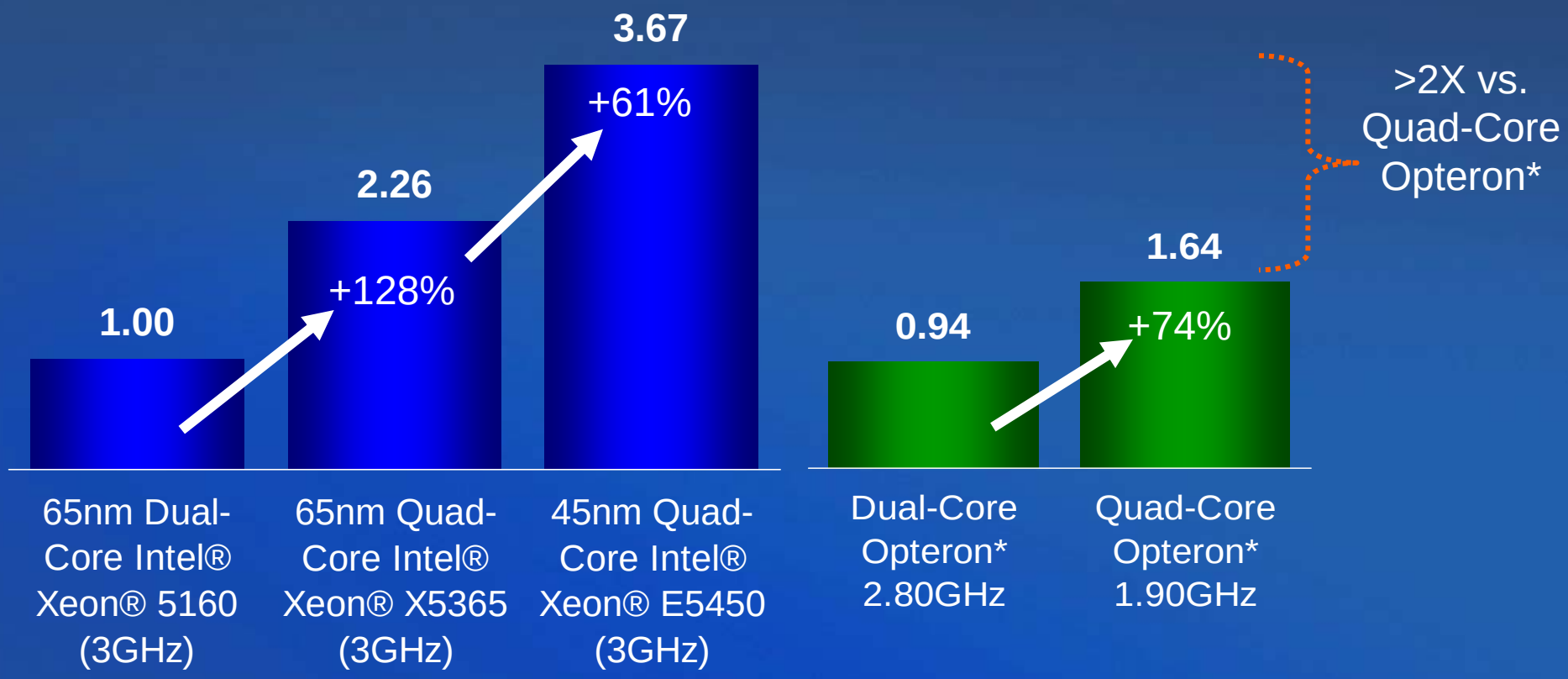
Xeon E5472 vs Xeon X5365 on HPC benchmarks



Delivering Leadership Performance on HPC Applications

Data source: Published/Measured results as of Oct 2, 2007. See backup for details

And a Closer Look at FSI
Black Scholes* v2.0 Performance Comparison



2X Leadership on FSI with 45nm Intel® Xeon®

Data source: Published/Measured results as of Oct 2, 2007. See backup for details

Solid Industry Momentum

Summary

45 nm Hi-k
+ Metal-gate Transistor → Industry Leading Process Technology

New Eco-friendly Penryn Family → Energy Efficient Products
Lead-free now, Halogen free in '08

16 New Processors
Enhanced Server Platforms → Investment Protection
Meet Diverse Needs

Penryn Family Extends Intel's Leadership

Collaborating with Wall Street

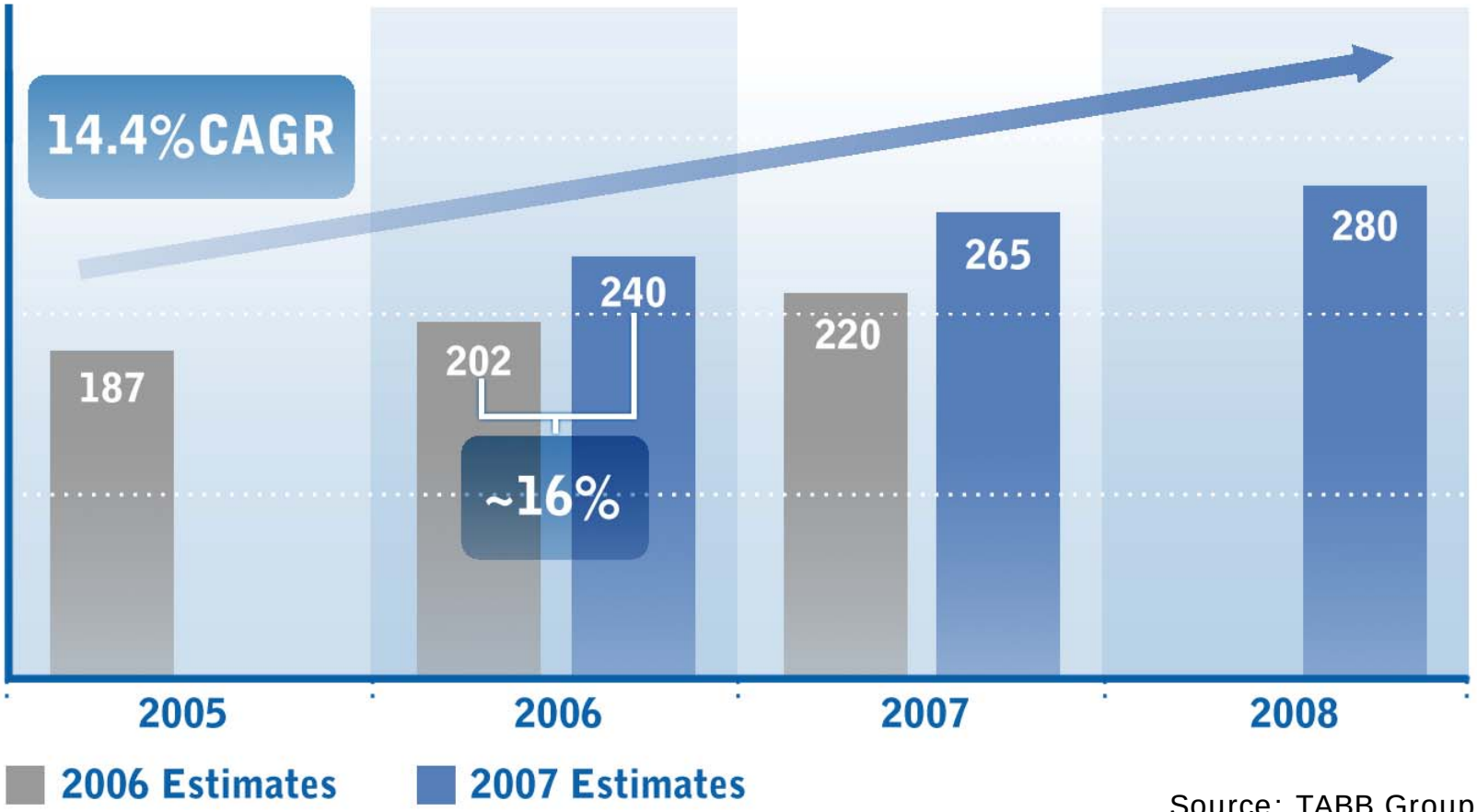
Daryan Dehghanpisheh
Enterprise Account Manager
Intel Americas
November 13 2007

Why Wall Street Is Important

- Leading Technology Indicator
- Large consumer of server technology
- Profitability is dependent on IT solutions
  - Demonstrable ROI on IT drives detailed feedback on products
  - Early adopters, trend setters, savvy enablers
- Significant R&D
  - Growing spiral of HPC and mathematical discoveries
  - Large IT departments creating custom solutions
- Wall Street solutions influence other markets

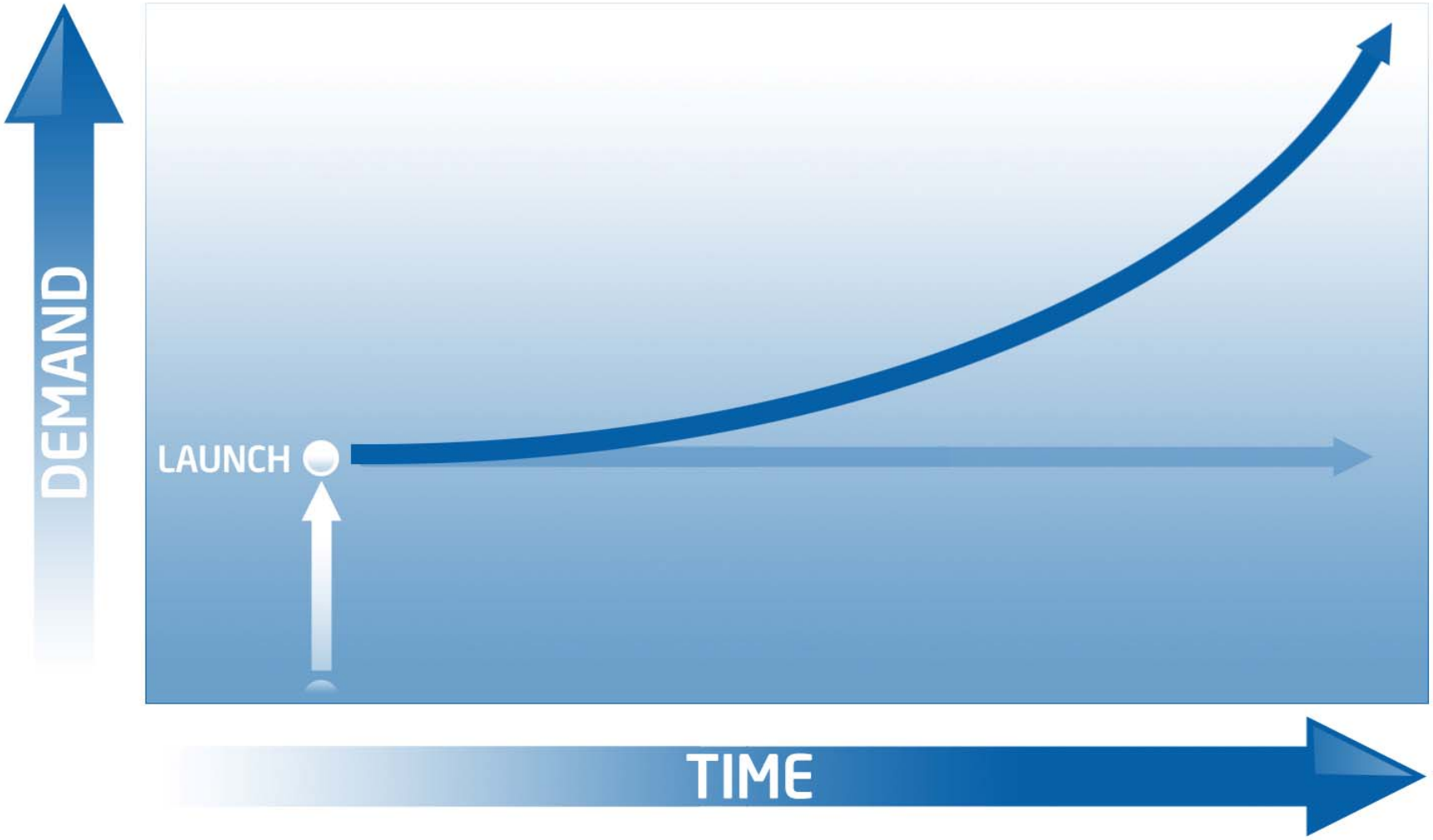
IT on Wall Street Estimates

Total number of servers
All manufacturers and platforms
(in thousands)

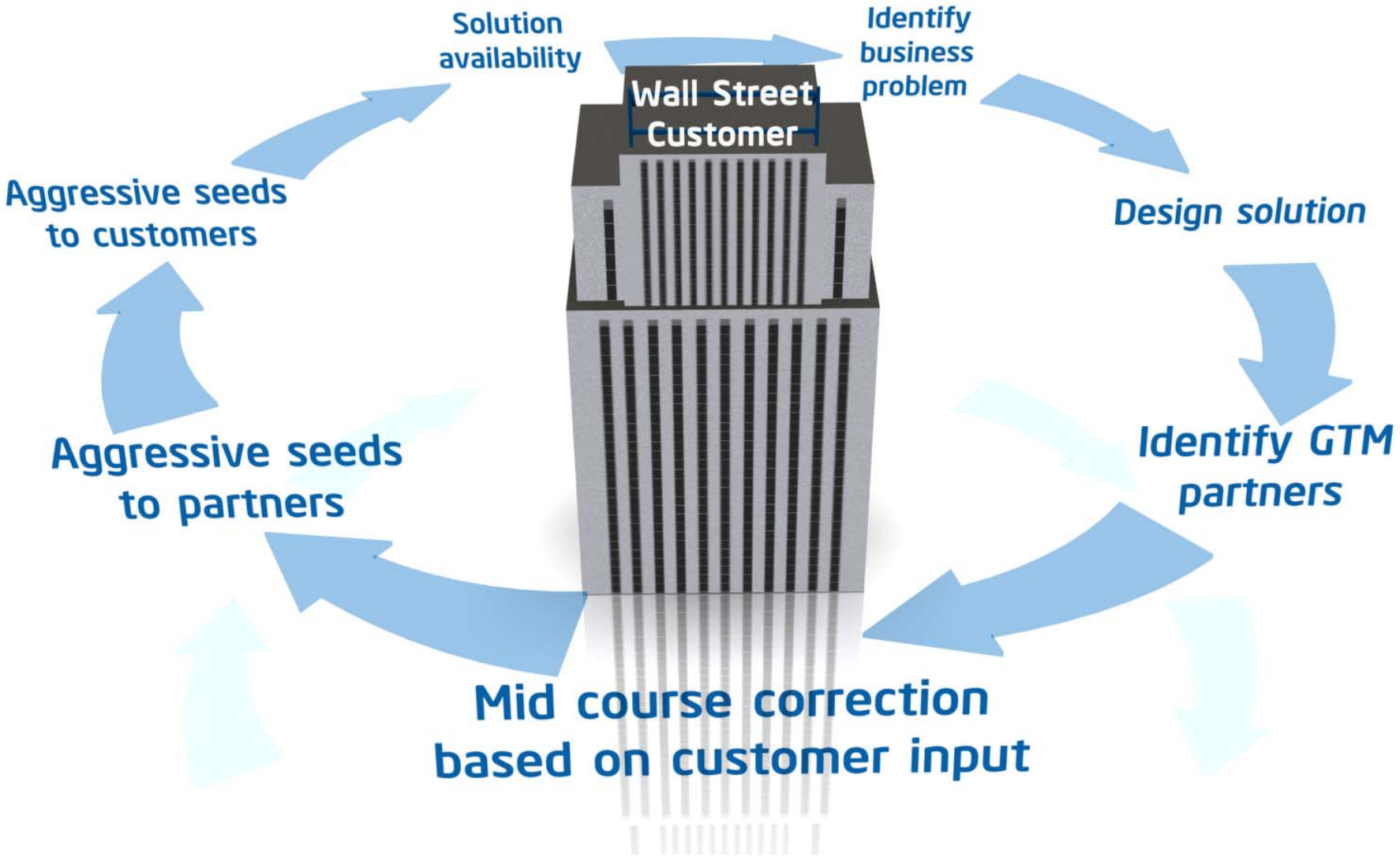


Source: TABB Group Outreach

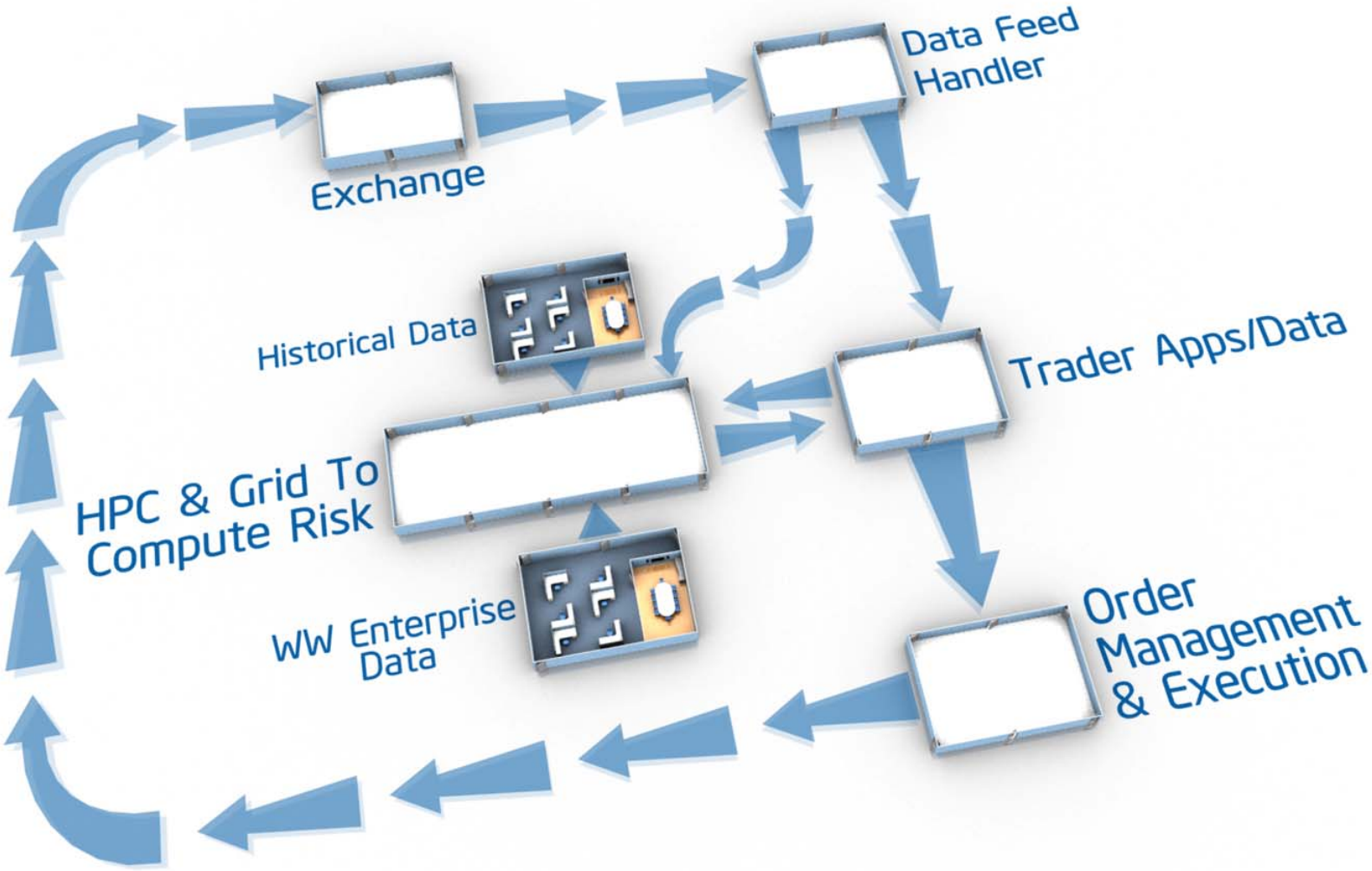
Bringing the Benefits of Penryn to Market



Intel's Strategy for Winning on Wall Street



Trading – The Biggest Test

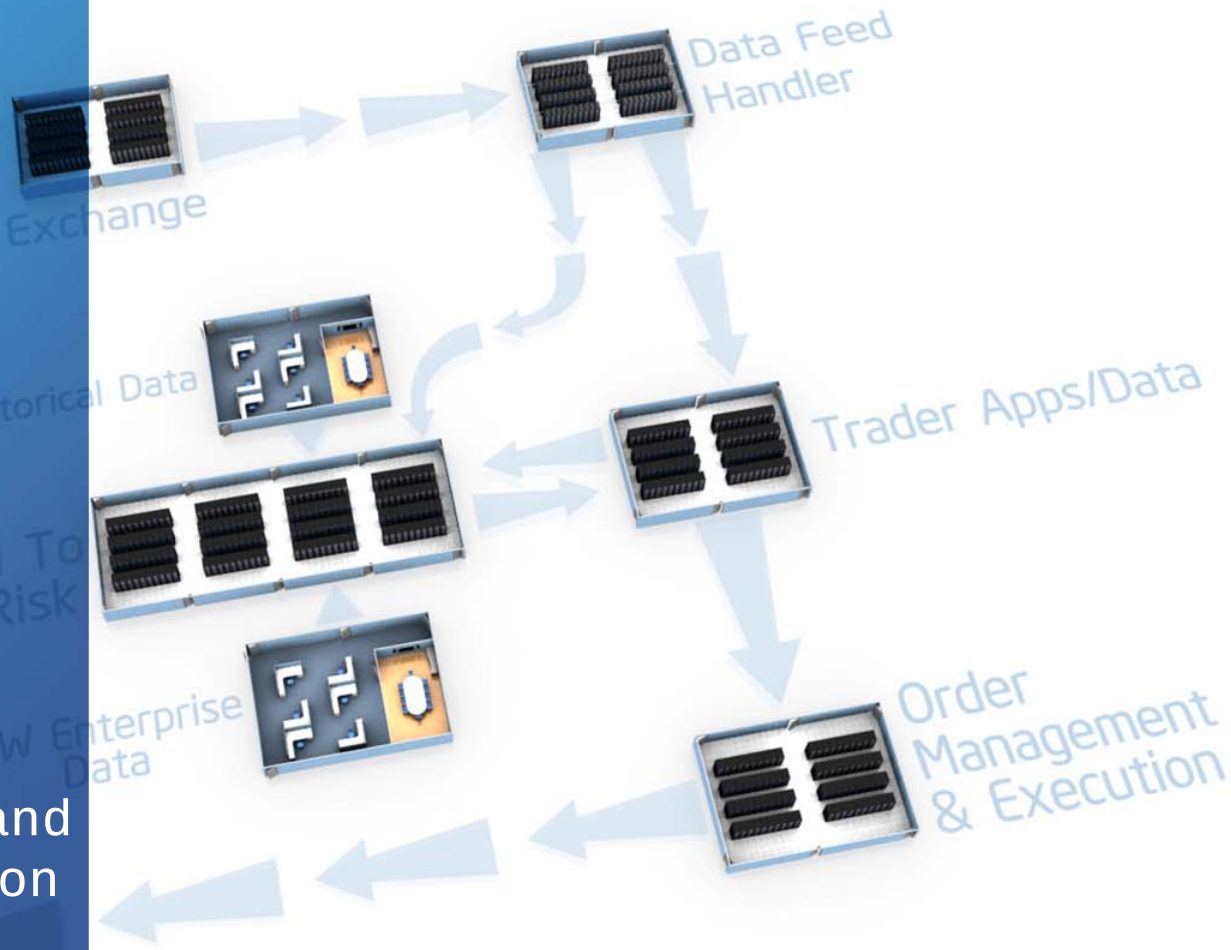


"Today at some of the more sophisticated trading organizations a single millisecond advantage can be worth millions of dollars in revenue a year." Larry Tabb, The Tabb Group

Intel's Platform Solution Approach

- Multi-core, multi-processor
- Energy efficiency
- Improved memory bandwidth
- Accelerating I/O to critical applications
- Improved network bandwidth
- Improved storage bandwidth

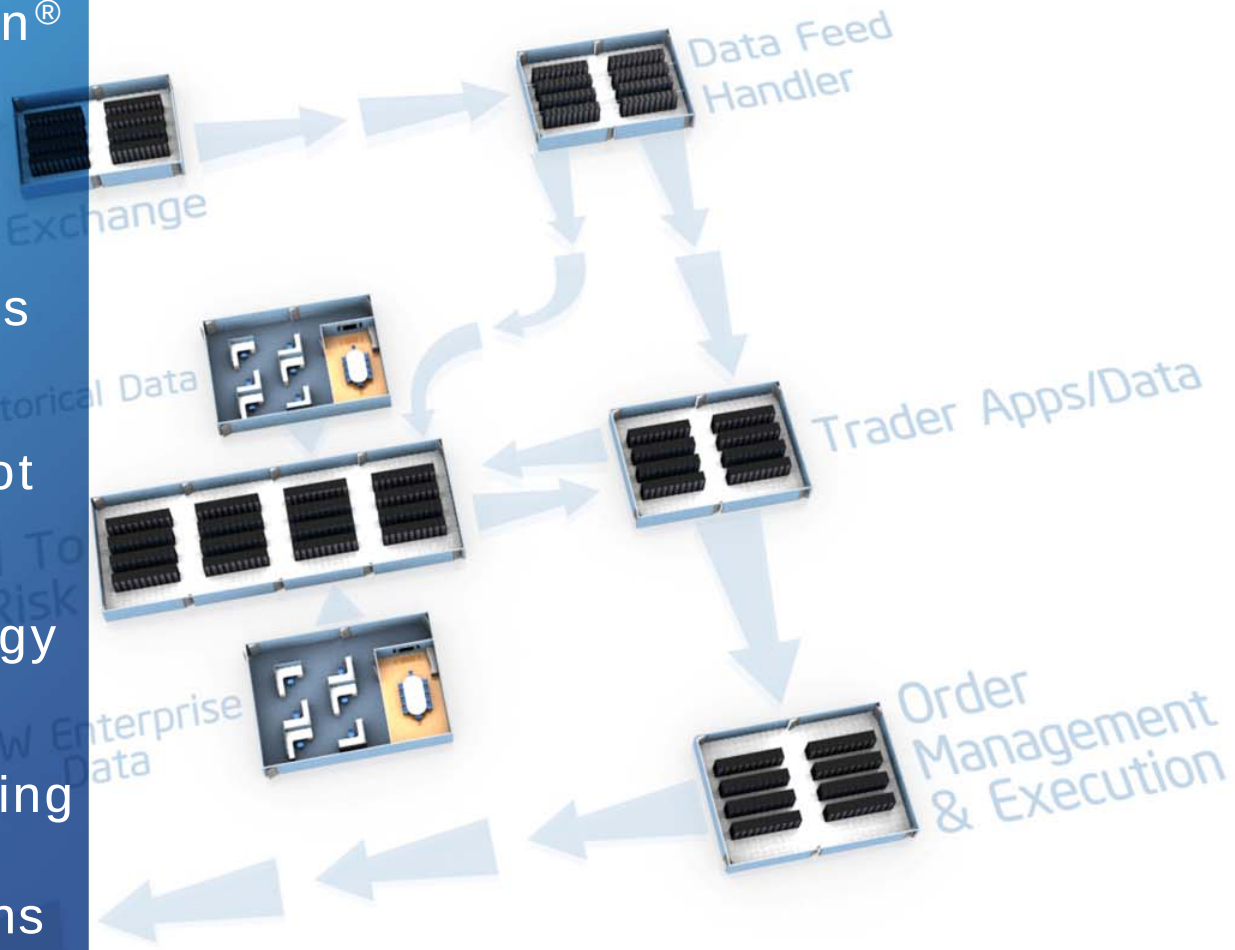
GOAL: Reduce latency and collapse timing delta on pricing updates



Intel's Platform Solution Approach

- Quad-Core Intel® Xeon® Processors
- Intel® QuickAssist™ Technology
- Intel® Connects Cables
- Intel® I/OAT
- Intel® Rapid BIOS Boot
- Linux Adoption
- Intel Capital Technology Day

The Result? Faster Trading … Reduced Latency … Faster Risk Calculations



Q & A

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Appendix
(benchmark configuration information)

More Performance in the Stable Platform – Config Details

SPECint*_rate2006

- Quad-Core Intel® Xeon® processor X5365 based platform details: Supermicro* Motherboard X7DB3 server platform with two Quad-Core Intel Xeon processor X5365 3.0GHz, 2x4MB L2 Cache, 1333MHz FSB, 32GB Memory (8x4GB DDR2 5300, CL-5-5-5, ECC), 64-Bit Suse Linux Enterprise Server 10 SP1, Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725. Referenced as published at 117 (SPECint_rate2006) and 98 (SPECint_rate_base2006). For more information see http://www.spec.org/cpu2006/results/res2007q4/cpu2006-20070921-02123.html
- Quad-Core Intel® Xeon® processor X5460 based platform details: Fujitsu Siemens PRIMERGY RX300 S4 server platform with two Quad-Core Intel Xeon processor X5460 3.16GHz, 12MB L2 Cache, 1333MHz FSB, 16GB Memory (8x2GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC), SUSE LINUX Enterprise Server 10 SP1 x86_64 Kernel 2.6.16.46-0.12-smp, Intel C++ Compiler for Linux32 and Linux64 Version 10.1 Build 20070725. Measured at 138 (SPECint□_rate2006) and 113 (SPECint_rate_base2006)

SPECfp*_rate2006

- Quad-Core Intel® Xeon® processor X5365 based platform details: Supermicro X7DB8+ platform with two Intel Xeon processors X5365 3.00 GHz, 8 cores, 2x4MB L2 cache, 16GB memory (8x2GB Samsung* DDR2 5300F, 2 rank, CL5-5-5, ECC), 64-Bit SUSE LINUX Enterprise Server 10 SP1 Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64, Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 Build 20070725. Published in September 2007. Referenced as published at 63.1 (SPECfp_rate_base2006) and 66.9 (SPECfp_rate2006). For more information see http://www.spec.org/cpu2006/results/res2007q3/cpu2006-20070821-01886.html
- Quad-Core Intel® Xeon® processor X5460 based platform details: HP Proliant DL360 G5 server platform with two Quad-Core Intel Xeon processor X5460 3.16GHz, 12MB L2 Cache, 1333MHz FSB, 16GB Memory (8x2GB DDR2-667 FBDIMM), 64-Bit SUSE LINUX Enterprise Server 10 SP1 Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64, Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 Build 20070725. Submitted to www.spec.org for review. Referenced as published at 70.3 (SPECfp_rate_base2006) and 78.5 (SPECfp_rate2006).

TPC-C

- Quad-Core Intel® Xeon® processor X5365 based platform details: HP ProLiant ML370 G5 platform with Quad-Core Intel Xeon processor X5365 3.0GHz (2 processors / 8 cores / 8 threads), 2x4MB L2 cache, 1333 MHz system bus, 64GB memory, Microsoft SQL Server 2005 x64 Enterprise Edt SP2, Microsoft Windows Server 2003 Enterprise x64 Ent. R2. Referenced as published at 251,300 tpmC and $1.63/tpmC; availability date September 5, 2007. For more information see http://tpc.org/tpcc/results/tpcc_result_detail.asp?id=107090501
- Quad-Core Intel® Xeon® processor X5460 based HP ProLiant details: HP ProLiant ML370 G5 platform with Quad-Core Intel Xeon processor X5460 3.16GHz (2 processors / 8 cores / 8 threads), 2x6MB L2 cache, 1333 MHz system bus, 64GB memory, Oracle Database 10G, Red Hat Enterprise Linux (RHEL 5). Referenced as published at 273,666 tpmC and $1.38/tpmC; Availability date November 12, 2007

SPECjbb2005

- Quad-Core Intel® Xeon® processor X5365 based platform details: HP ProLiant DL380 G5 server platform with two Quad-Core Intel Xeon processor X5365 3.0GHz, 2x4 MB L2 Cache, 1333MHz FSB, 32GB Memory (8x4GB PC2-5300F), BEA JRockit(R) 6 P27.4.0-10 (build P27.4.0-10-90053-1.6.0_02-20071009-1827-windows-x86_64), Microsoft Windows Server 2003 Enterprise x64 Edition SP1. Referenced as published at 250,918 bops and 62,730 bops/JVM. For more information see http://www.spec.org/jbb2005/results/res2007q4/jbb2005-20071023-00391.html
- Quad-Core Intel® Xeon® processor X5460 based platform details: Dell PowerEdge 2950 server platform with two Quad-Core Intel Xeon processor X5460 3.16GHz, 12MB L2 Cache, 1333MHz FSB, 16GB Memory (8x2GB DDR2-667 FBDIMM), BEA JRockit(R) 6.0 P27.4.0 (build P27.4.0-10-90053-1.6.0_02-20071009-1827-windows-x86_64), Microsoft Windows Server 2003 Enterprise x64 Edition SP1. Measured at 303,130 SPECjbb2005 bops and 75783 SPECjbb2005 bops/JVM.

VMMark

- Quad-Core Intel® Xeon® processor X5365 based platform details: Dell PowerEdge 2950 server platform with 2x Quad-Core Intel® Xeon® processor X5365 3.0GHz, 2x4MB L2 Cache, 1333MHz FSB, 32GB Memory, Microsoft Windows Server 2003 SP2, VMware ESX Server V3.0.1. Measured at 7.03@5 tiles. For more information see http://www.vmware.com/files/pdf/vmmark_dell2.PDF
- Quad-Core Intel® Xeon® processor X5460 based platform details: Dell PowerEdge 2950 server platform with 2x Quad-Core Intel® Xeon® processor X5460 3.16GHz, 2x6MB L2 Cache, 1333MHz FSB, 32GB Memory (8x4GB 667MHz FBDIMM), Microsoft Windows Server 2003 SP2, VMware ESX Server V3.5. Measured at 8.47@6 tiles.

SAP-SD

- Quad-Core Intel® Xeon® processor X5365 based platform details: HP ProLiant DL380 G5 platform with two Quad-Core Intel Xeon processors X5365 3.0GHz, 2x4MB L2 cache, 32GB memory, Microsoft Windows Server 2003 Enterprise Edition, Microsoft SQL Server 2005, SAP ECC Release 6.0 (2005). Referenced as published at 2,080 users. Certification number 2007057 (PDF 45KB).
- Quad-Core Intel® Xeon® processor X5460 based platform details: HP ProLiant BL460C server platform with two Quad-Core Intel Xeon processors X5460 3.16GHz, 12MB L2 cache, 1333MHz FSB, 32GB memory, Microsoft Windows Server 2003 Enterprise Edition, Microsoft SQL Server 2005, SAP ECC Release 6.0 (2005). Measured at 2,449 users.

Energy Efficient Performance – Config details

- **Configuration Details:** 38% improvement in Perf/Watt based on performance comparison of results on SPECjbb2005 benchmark. Intel internal measurement as of November 11, 2007. System power was measured during the steady-state window of the performance run. Performance per system watt is calculated by taking the performance score from the benchmark and dividing it by the average system power usage (AC power from the wall).

- **Quad-Core Intel® Xeon® Processor E5345 based platform details:** Intel® preproduction server platform with two Quad-Core Intel® Xeon® Processor E5345, 2.33 GHz, 2x4MB L2 Cache, 1333MHz system bus, 16GB memory (8x2GB DDR2-667), Microsoft Windows* 2003 Enterprise Edition. BEA JRockit build P27.4.0-3-86647-1.6.0_02-20070801-1931-windows-x86_64. Run with four JVM instances.
- **Quad-Core Intel® Xeon® Processor E5450 based platform details:** Intel® preproduction server platform with two Quad-Core Intel® Xeon® Processor E5450, 3.00 GHz, 2x6MB L2 Cache, 1333MHz system bus, 16GB memory (8x2GB DDR2-667), Microsoft Windows* 2003 Enterprise Edition. BEA JRockit build P27.4.0-3-86647-1.6.0_02-20070801-1931-windows-x86_64. Run with four JVM instances.

Added Bandwidth Translates into HPC Performance – Config details

- **SPECfp_rate2006**
  - **Quad-Core Intel® Xeon® processor X5365 based platform details:** Supermicro X7DB8+ platform with two Intel Xeon processors X5365 3.00 GHz, 8 cores, 2x4MB L2 cache, 16GB memory (8x2GB Samsung* DDR2 5300F, 2 rank, CL5-5-5, ECC), 64-Bit SUSE LINUX Enterprise Server 10 SP1 Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64, Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 Build 20070725. Published in September 2007. Referenced as published at 63.1 (SPECfp_rate_base2006) and 66.9 (SPECfp_rate2006). For more information see http://www.spec.org/cpu2006/results/res2007q3/cpu2006-20070821-01886.html
  - **Quad-Core Intel® Xeon® processor E5472 based platform details:** Supermicro X7DW3 server platform with two Quad-Core Intel Xeon processor E5472 3.00GHz, 12MB L2 Cache, 32GB Memory (8x4GB PC2-6400 DDR2-800, CL5, 2 rank, 8 bank), SUSE LINUX 10.1 X86-64 (Linux 2.6.16.13-4-smp), Intel C++/Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008. Measured at 78.4 (SPECfp_rate_base2006) and 88.1 (SPECfp_rate2006). Submitted to www.spec.org as of Nov 12, 2007

- **HPC Application Benchmarks (All other data shown) platform details:**
  - **Configuration Details:** All comparisons based on results measured/published/submitted/approved as of November 11, 2007. Same platform configuration for all the workloads
  - **Quad-Core Intel® Xeon® Processor X5365 based platform details:** Supermicro* X7DB8+ server platform with two Quad-Core Intel Xeon processor X5365 3.00GHz, 2x4MB L2 Cache, 1333MHZ FSB, 16GB Memory (8x2GB FBD 667MHz), 64-bit Red Hat* Enterprise Linux 4 Update 4.
  - **Quad-Core Intel® Xeon® Processor E5472 based platform details:** Supermicro* X7DWA-N server platform with two Quad-Core Intel Xeon processor E5472 3.00GHz, 2x6MB L2 Cache, 1600MHZ FSB, 16GB Memory (8x2GB FBD 800MHz), 64-bit Red Hat* Enterprise Linux 4 Update 4.
- **ISV Application Workload details**
  - Fluent* v6.3.26 - FLUENT is a powerful computational fluid dynamics (CFD) software package from ANSYS, Inc. It offers a comprehensive range of physical models that can be applied to simulation-based product development in a broad range of industries and applications. The benchmark suite of 15 real-world cases covers a representative set of CFD analysis types and simulation model sizes. Dual core results are based on 4-process parallel FLUENT; quad core results are based on 8-process parallel FLUENT. See http://www.fluent.com/software/fluent for details.
  - PAM-CRASH* v2006.0 - Crash & Occupant Safety/Manufacturing segment. World's most widely used crash simulation software. Highly scalable and one of the most memory bandwidth application in HPC eco-system. Version used is 2006.0, 64-bit Intel optimized binary, using Intel MPI 3.0. Standard frontal crash test from USNCAP consortium. Model Chrysler NEON with 300K and 1M elements. Audi frontal crash test with 1M element model.
  - Schlumberger Eclipse v2006.1 - Schlumberger Eclipse* is commercial simulator that is used to predict the flow of petroleum fluid and gas compositions in oil and gas reservoirs. The benchmarks use Eclipse* Parallel to simulate black oil workloads up to 1 million cells. (E100 100K, ONEM1)
  - LS-Dyna - Neon_refined_revised - LS-DYNA is a commercial engineering application used in finite element analysis such as a car collision. The workloads used in these comparisons is called neon_refined_revised and is publicly available from www.topcrunch.org. The metric for the benchmark is elapsed time in seconds (lower is better).
  - Synopsys Proteus - Synopsys Proteus OPC is a distributed application used in semiconductor design. We tested throughput by running one input dataset, dataset A, processed by multiple OPC application instances (one job per processing core on each server)
  - Monte Carlo* v0.1 – Financial Modeling workload. Monte Carlo methods are a widely used class of computational algorithms for simulating the behavior of various physical and mathematical systems, and for other computations.
  - CAM* v3.1p2 - CAM – (Community Atmosphere Model) from NCAR – the latest in a series of global atmosphere models for the weather and climate research communities. CAM also serves as the atmospheric component of the Community Climate System Model (CCSM). (http://www.ccsm.ucar.edu/models/atm-cam). Workload name – 2x25
  - Landmark VIP* v91o2 - Landmark VIP* is a commercial reservoir simulator used to predict the flow of petroleum fluid and gas compositions in oil and gas reservoirs.The benchmarks measure the time to simulate black oil and compositional workloads for models up to 1 million cells.
  - POP* v2.01 - POP – (Parallel Ocean Program) from Los Alamos National Lab (LANL) – an ocean circulation model in which depth is used as the vertical coordinate. The model solves the three-dimensional primitive equations for fluid motions on the sphere. (http://climate.lanl.gov/Models/POP). Workload name – X1
  - MILC* v7 - MILC – from MIMD Lattice Computation Collaboration – large scale numerical simulations to study quantum chromodynamics (QDC) (http://www.physics.utah.edu/~detar/milc/) Parallelized by means of MPI*. Benchmarked version: Version 7. see http://www.physics.utah.edu/~detar/milc/milc_qcd.html
  - Black Scholes* v2.0 - The Black-Scholes kernel workload is based on a financial modeling algorithm for the pricing of European-style options. After its publication in 1973 by Fisher Black, Myron Scholes, and Robert Merton, its impact was enormous and rapid. The benchmark consists of a kernel that implements a derivative of the Black and Scholes technique. SunGard developed the code, which uses a continuous-fraction technique that is more accurate than the traditional polynomial approximation technique. The test produces the time, in seconds, the server took to complete the workload; lower completion times are better.