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Tick Tock: Powerful, Efficient and Predictable

Patrick P. Gelsinger
Sr. Vice President and GM,
Digital Enterprise Group

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Airline Industry Defining Moment



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Airplanes Then and Now

	Boeing 747-100	Boeing 787-9 ⁵
Passengers	452 ¹	250-290
Cargo	5250 ¹ cu ft	5400 cu ft
Range Nautical Miles	6000 ¹	8000-8500
Revenue Passenger Miles/Gallon	15.0 ³	48.9 ³ +20%
Time To Load	60 ¹	60



¹Boeing 747-100/200 http://www.boeing.com/commercial/airports/acaps/747_123sp.pdf <http://www.boeing.com/history/boeing/747.html> | Baggage (# of pieces) <http://www.aalines.org/economics/energy/fuel+efficiency.htm> ²Boeing 787-900ER http://www.boeing.com/commercial/787family/pdf_900ERtech.html | ³Boeing 787-9 <http://www.boeing.com/commercial/787family/787-9prod.html>

If The Tick Tock Model Applied

Passengers

118M

Load/Un-load Time

12 ms

Revenue Passenger Miles/Gallon

3.9M



Number of Components per Integrated

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Tick Tock Model Applied

Platform Capability

I/O Innovation

Energy Efficient Performance



Number of Components per Integrated



Tick Tock Model Applied

Platform Capability

I/O Innovation

Energy Efficient Performance



Number of Components per Integrated

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intel



Platform Capability

Virtualization

Manageability

Security



Virtualization = Profound Changes

Virtualization Disaggregates The OS

Virtualization Builds The New
Data Center Operating System



Next Step in Quad-Core Ramp

Intel® Xeon® Processor 7300 Based Platforms



Built for Virtualization and Consolidation



Energy Efficient
Scalable Performance



Enterprise Proven Reliability

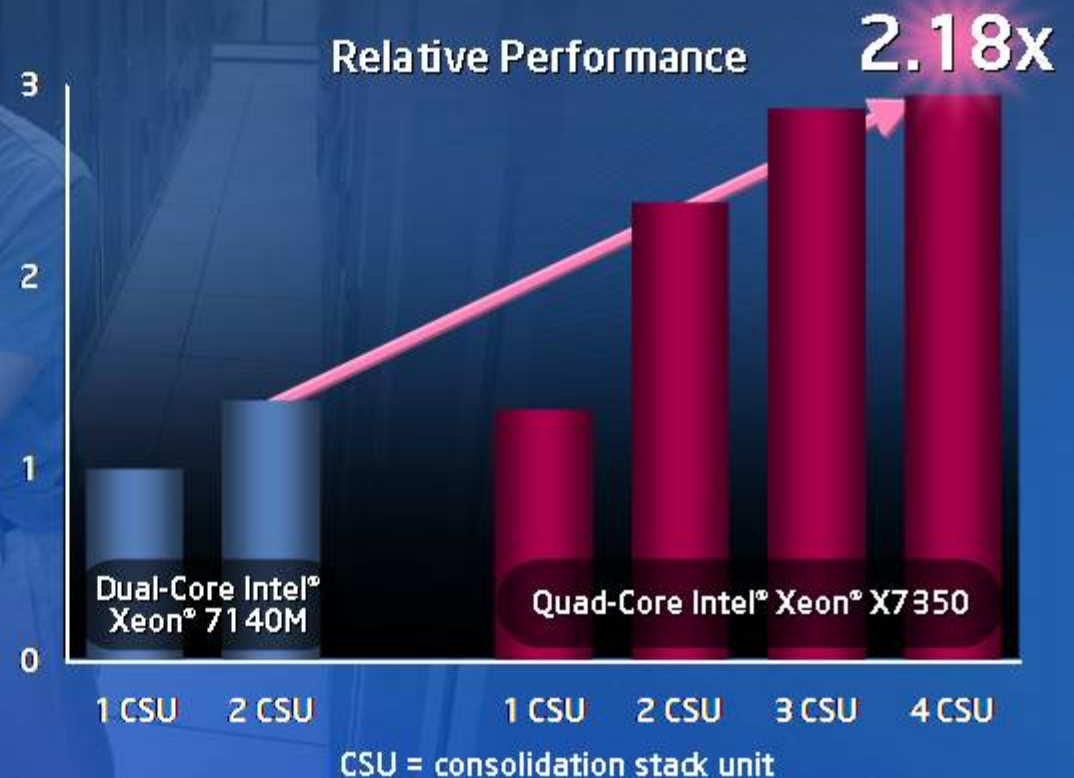


Quad-Core Intel® Xeon® Processor 7300 Series-based Servers

vConsolidate with VMware*
ESX Server

Enhanced Virtualization
Performance

Great Scalability



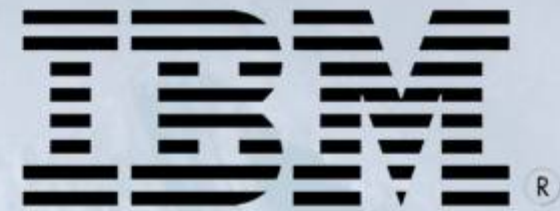
The Virtualization Platform



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Data source: Published/Measured/Submitted results as of Sept 5, 2007. See backup for details

Virtualization Wave



**IBM x3950 M2 System X Server Featuring Quad-Core
Intel® Xeon 7300 Processors and VMware ESX3i**



Virtualization Wave

HITACHI
Inspire the Next
VIRTAGE



Hitachi BladeSymphony 1000 Featuring Intel® Itanium® Processor "Montvale" and Hitachi Virtage Hypervisor



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Virtualization Wave

lenovo

Microsoft®



Lenovo R630 G7 Server Featuring Quad-Core Intel® Xeon® 7300 Processors and

HITAC Microsoft Windows Server Virtualization

Inspire the Next

VIRTAGE



x4



IBM

vmware



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Virtualization Wave



lenovo
Microsoft

i n v e n t

virtualiron

HITACHI
Inspire the Next
VIRTAGE

HP ProLiant DL580 G5 Server Featuring Quad-Core Intel® Xeon® 7300 Processors and Virtual Iron 4.0



IBM

vmware



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Virtualization Wave



Intel® Xeon® 7300 Processor-based Sun Server
Featuring Solaris xVM Hypervisor

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VIRTAGE



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John Fowler
Executive Vice President,
Sun Microsystems



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The World's Most Innovative OS

- Solaris xVM Virtualization
- Optimized for Intel Multi-core Performance
- Key Solaris Features
 - > Predictive Self-Healing
 - > Fault Management
 - > Multi-Level Security
 - > ZFS
 - > DTrace
- Participate in the Community



Solaris 10 
DTrace: Winner of the
Wall Street Journal's 2006
Technology Innovation Award

opensolaris.org

Virtualization Wave



invent
VirtualIron



Sun
microsystems



solaris



lenovo
Microsoft



parallels

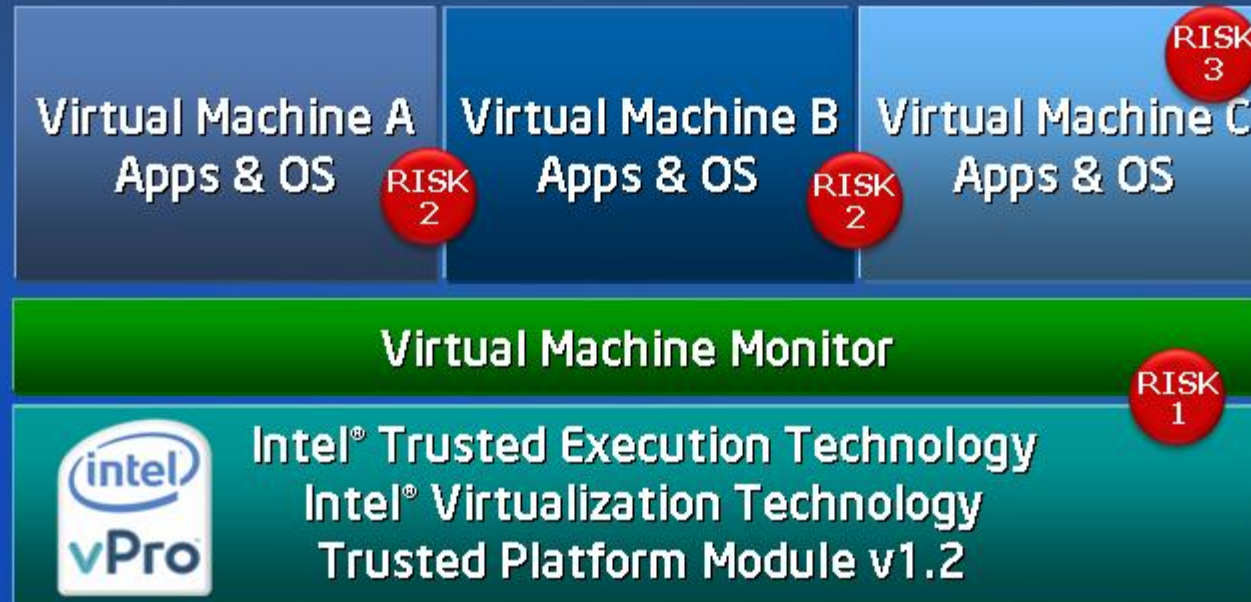
HITACHI
Inspire the Next
VIRTAGE



vmware



Some IT Concerns with Software-Only Virtualization



- 1** VMM Integrity
- 2** Virtual Machine Isolation
- 3** Data Exposure In Memory



Creating Protected Virtual Machines with Intel® TXT and Intel® VT

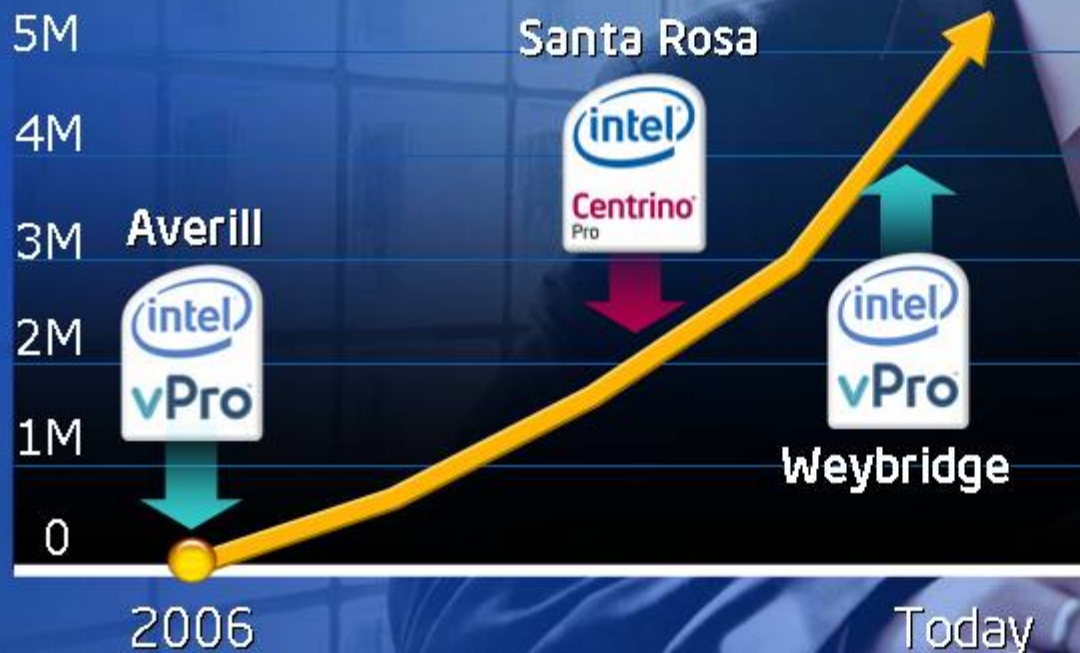


- 1 VMM Integrity → VMM Measured Launch
- 2 Virtual Machine Isolation → Hardware-enforced Isolation
- 3 Data Exposure In Memory → Hardware-enforced Data Removal



Business-Optimized Clients Ramp Creates Opportunity

Cumulative Shipments



3M
BMW
FujiFilm
ING
Johns Hopkins
Pioneer
Plymouth University
Verizon
Marriott
...and many more



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* Other brands may be claimed as the property of others.

Looking Ahead: McCreary in 2H'08



45nm Penryn Family
(Dual & Quad Core)



"Eaglelake" Chipset
AMT 5.0
Integrated TPM 1.2



GbE "Boazman"

Built-in Manageability

Energy-efficient Performance
Energy Star 4.0 Capable

Environmental Leadership
Lead Free
Halogen Free



Looking Ahead: McCreary in 2H'08



45nm Penryn Family
(Dual & Quad Core)



"Eaglelake" Chipset
AMT 5.0
Integrated TPM 1.2

Danbury Technology



GbE "Boazman"

Built-in Manageability

Energy-efficient Performance
Energy Star 4.0 Capable

Environmental Leadership
Lead Free
Halogen Free

Data Security



Danbury Technology Hardware Enhanced Data Encryption

Today
Software

- Storage Management
- Client Policy Management
- User Interface
- Key Management & Recovery
- Key Protection
- Hard Disk Encryption

**2008 Intel® vPro™
Processor Technology**
Software Optimized For
Danbury Technology

Hardware

- Storage Management
- Client Policy Management
- User Interface
- Key Management & Recovery
- Key Protection
- Hard Disk Encryption
- AMT Integration





CREDANT[®]
TECHNOLOGIES



Be mobile. Be secure.

Bob Heard

**Founder & Chief Executive Officer
CREDANT Technologies, Inc.**



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Data Encryption - The Danbury Advantage



Stored Data Protection



Improved Security Management Deployment Usability



Next Generation Data Security + Protects Current Investment

Danbury Solutions Providers

CREDANT[®]
TECHNOLOGIES

Be mobile. Be secure.



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Danbury Solutions Providers



A Year Ago

Traditional Client Compute Models

Thin Clients
Terminal/Server

Claims:
Data security
TCO
Reduced complexity

SaaS Enabled Client

Thick Client
Desktops/Notebooks

Claims:
Increased Productivity
Rich User Experience
Mobility



Now, Let's Check Progress



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Operating System & Application Streaming

CITRIX[®]

Mark B. Templeton
Chief Executive Officer
Citrix Systems



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Virtualization Wave



invent
VirtualIron



Sun
microsystems



solaris



Microsoft



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Inspire the Next
VIRTAGE



Tick Tock Model Applied

Platform Capability

I/O Innovation

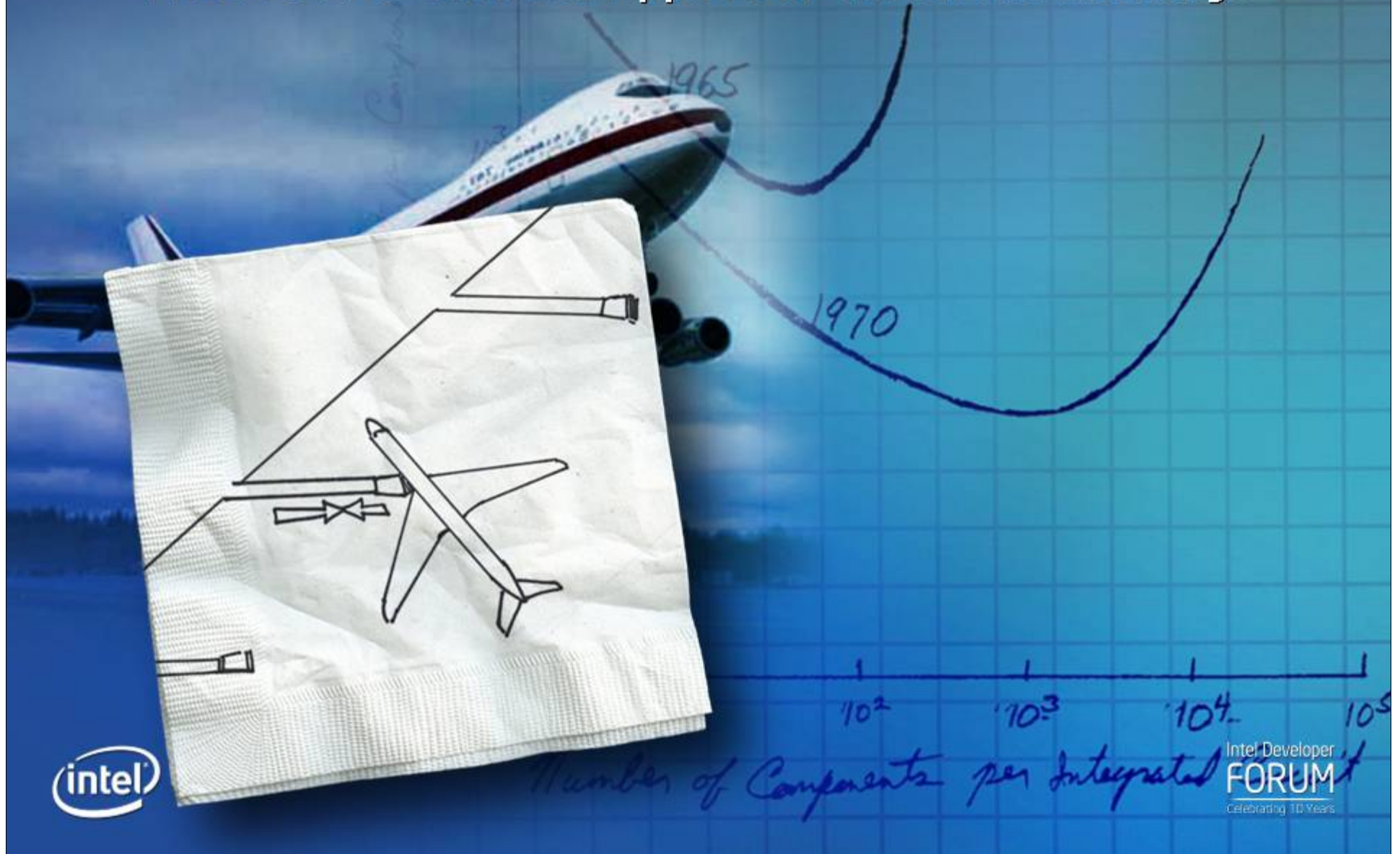
Energy Efficient Performance



Number of Components per Integrated

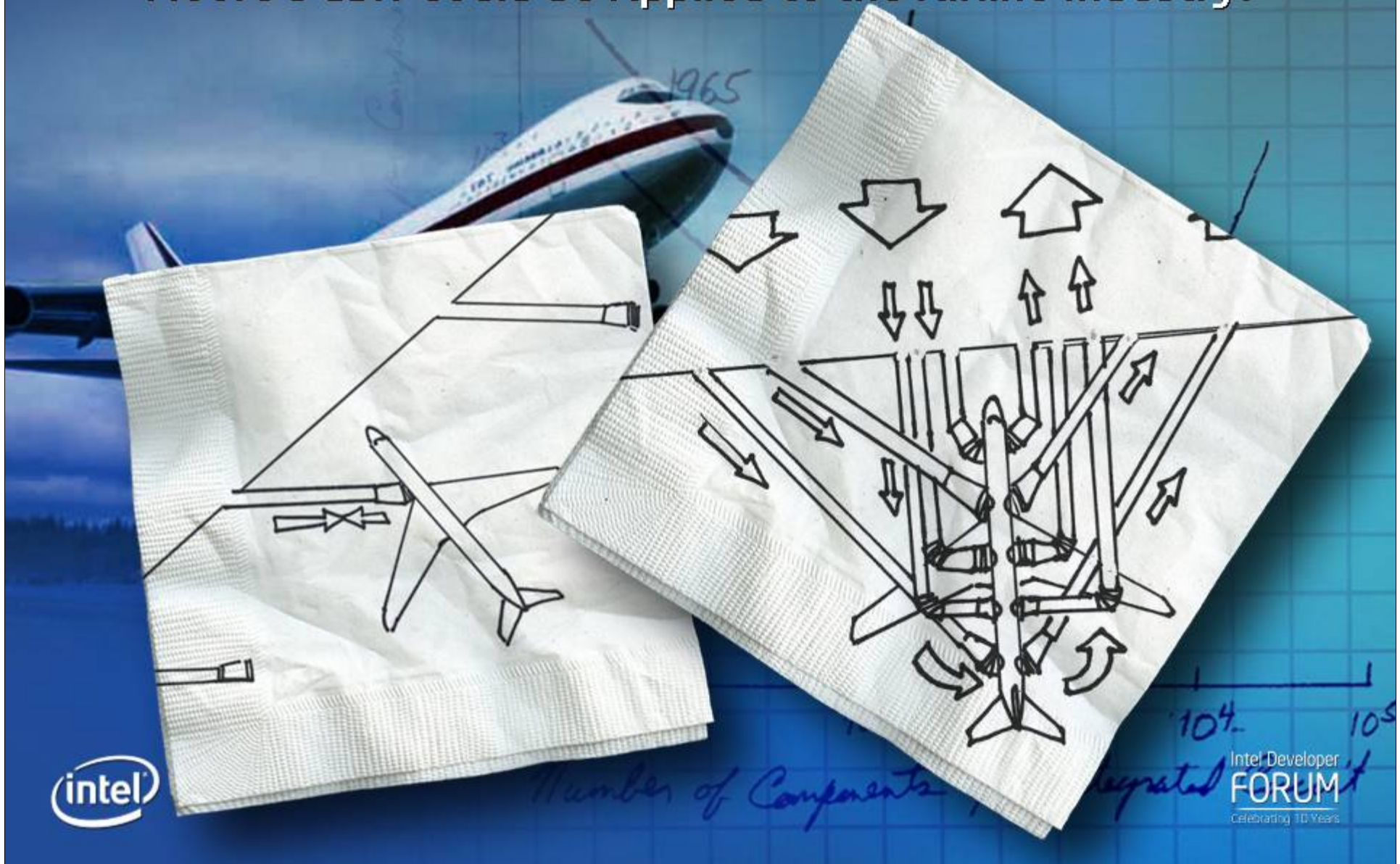


What If? Moore's Law Could be Applied to the Airline Industry?



What If?

Moore's Law Could be Applied to the Airline Industry?



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PCIe 2.0

2X PCIe1.0 Bandwidth

Broad IHV Support

Intel® Xeon® 5400 Chipset and
X38 Express Chipset In 2H'07

Nine Cards from Seven
Vendors Working
with Intel's Stoakley
Platform at 5GHz



PCIe 2.0

PCIe 3.0

2X PCIe1.0 Bandwidth

**2X PCIe 2.0 Bandwidth
Data Reuse
Dynamic Power Management
Atomic Operations**

Broad IHV Support

**Industry Standard Attach
For Accelerators**

**Intel® Xeon® 5400 Chipset and
X38 Express Chipset In 2H'07**

**Specifications In 2009
Products Expected In 2010**

Expanding Momentum and Innovation



Intel QuickAssist Technology Delivery



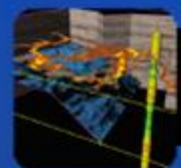
Improved Financial Analytics



Accelerated Content Processing and Security



Enhanced Image Processing



Efficient Oil and Gas Recovery



Faster Time to Scientific Innovation

Acceleration Abstraction Layer
for FSB Licensees

Initial Products 2H'07

ALTERA

CAVIUM NETWORKS

ClearSpeed™

CONVEY

HIFN

hp

invent

IBM

impulse
accelerated technologies

mitrion™
by mitronics™

NALLATECH

NETLOGIC
MICROSYSTEMS
Putting Intelligence in the Network™

NETRONOME
Total Performance. Total Control™

Rackable
systems
Enabling the Eco-Logical data center™

SENSORY
SYSTEMS

sgi

XILINX®

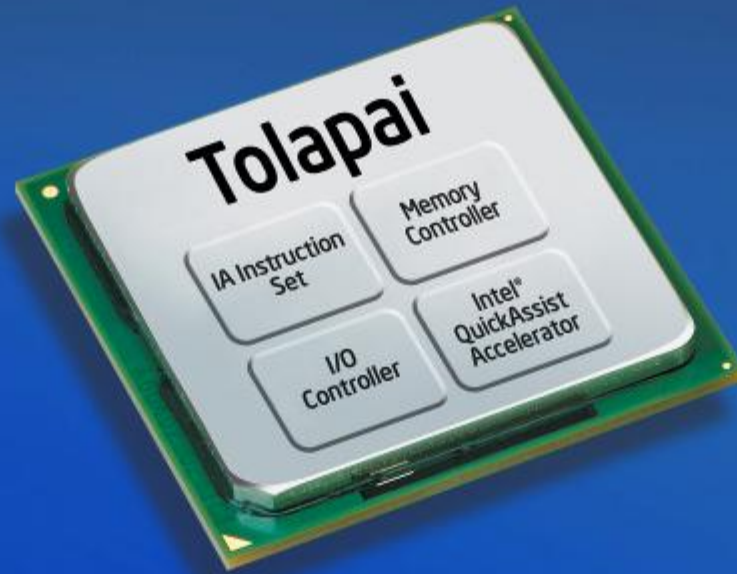
X TREME
DATA
Pushing Storage Technology to its Limits



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Tolapai SOC Accelerator in 2008

Up to
8X
Improved
Throughput



Up to
20%
Lower Power¹

Up To **45%** Reduction In Footprint



USB: The Way the World Connects

6.2B USB Devices Shipped Since 2001¹
2.1 B USB Devices Shipped in 2006



¹Source: In-Stat

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USB: The Way the World Connects

6.2B USB Devices Shipped Since 2001¹

2.1B USB Devices Shipped in 2006

USB 3.0 Promoters' Group



invent



Microsoft®

NEC

NXP
founded by Philips

TEXAS
INSTRUMENTS



¹Source: In-Stat

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USB: The Way the World Connects

6.2B USB Devices Shipped Since 2001¹

2.1B USB Devices Shipped in 2006

USB 3.0 Promoters' Group

USB 3.0 Specification: 1H'08

Backward Compatible

>10X Performance Over USB 2.0

Energy Efficient

Copper and Optical Interconnects



Microsoft®

NEC NXP founded by Philips

TEXAS
INSTRUMENTS



¹Source: In-Stat

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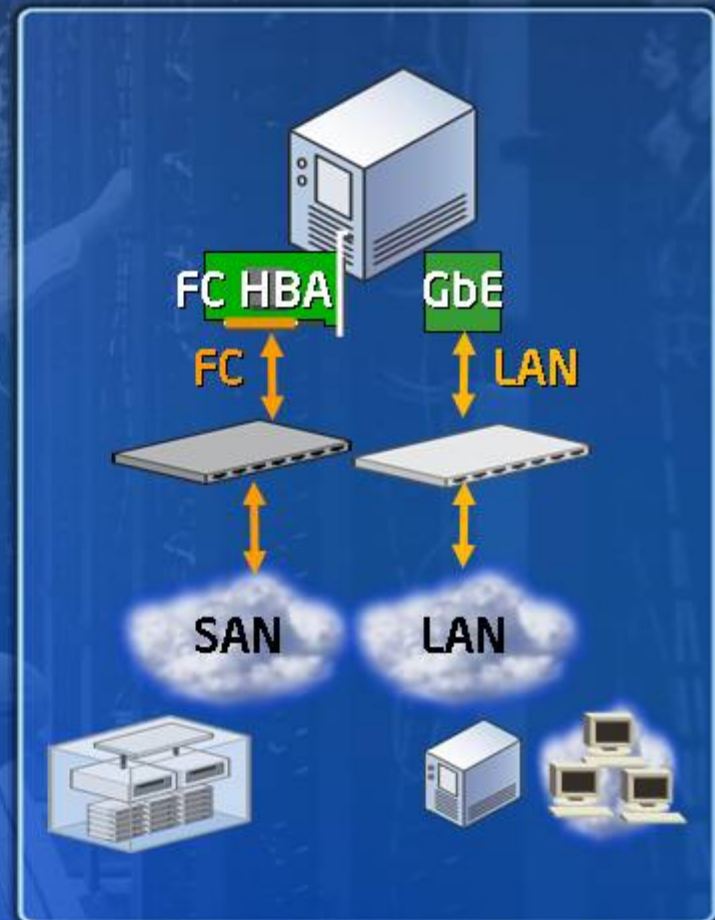
I/O Consolidation on Ethernet: Today

Parallel Networks

Costly

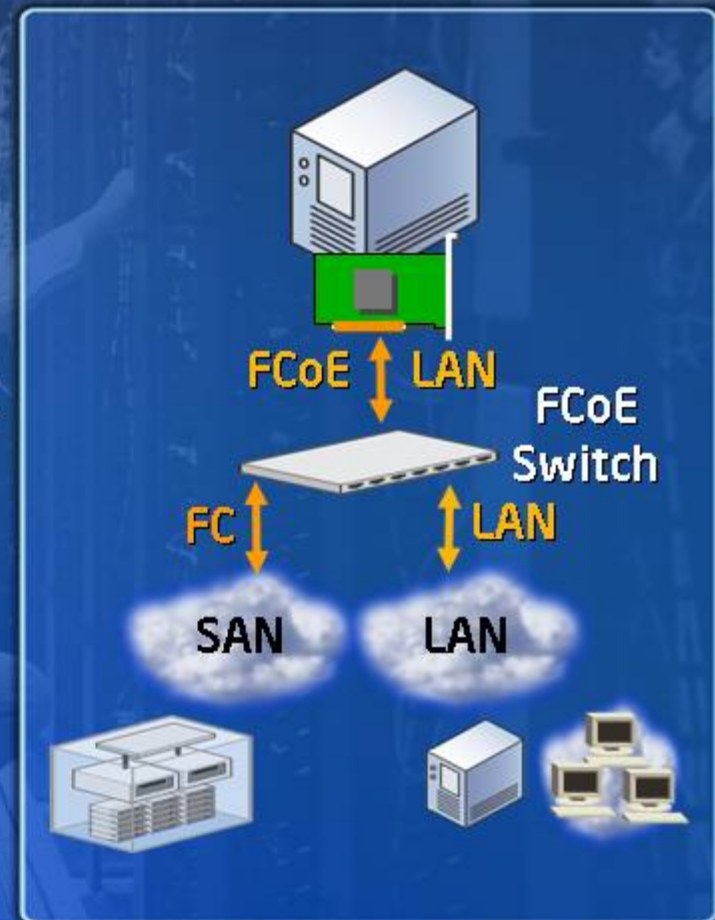
High Power

Hard to Manage



I/O Consolidation on Ethernet: ~2008

- Encapsulate Fibre Channel
 - T11 standardizing FCoE
 - Standards expected 2H'08
- Intel® 82598 10 Gigabit Ethernet Controller available now
 - Includes enhancements for Data Center Ethernet
- FCoE software solution stack available in 2008



I/O Consolidation on Ethernet: Vision

Fully Converged Network

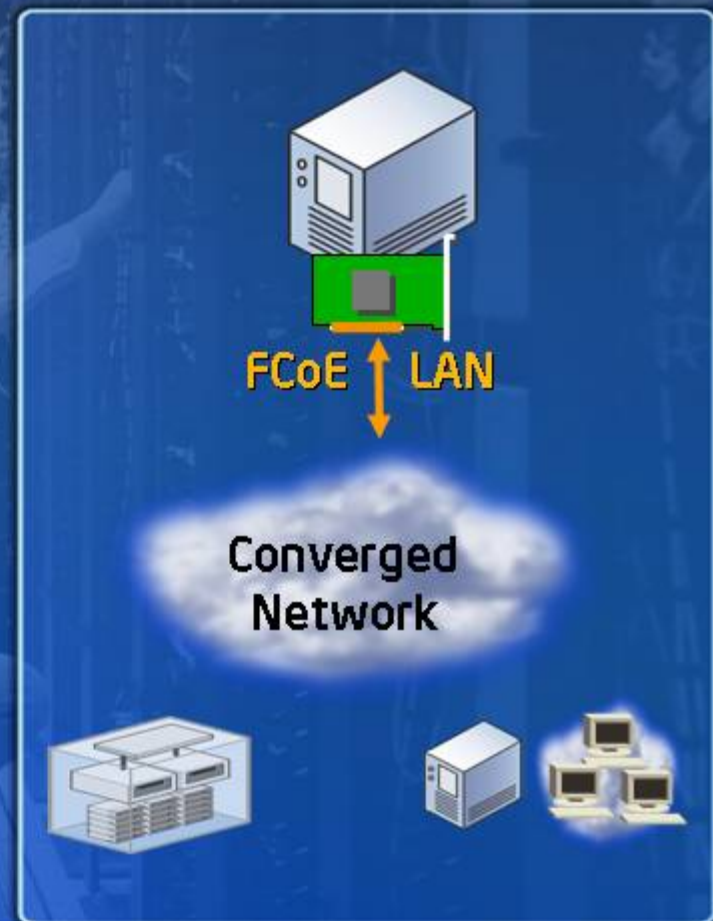
Reduces:

Cost

Size

Power

Complexity



Intel® High Performance Solid State Drive Technology



SATA 3.0 Gb/s Interface

Standard HDD Form Factors

10X-50X IOPS

>4.5X Power Savings² vs. HDD

2X Write Speed Performance

Revolutionizing Computing Platforms with NVM



¹ Based on early IOMETER results of 64K sequential reads ² Vs Seagate 15k Savvio (ST9367515S) datasheet. 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.

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Tick Tock Model Applied

Platform Capability

I/O Innovation

Energy Efficient Performance

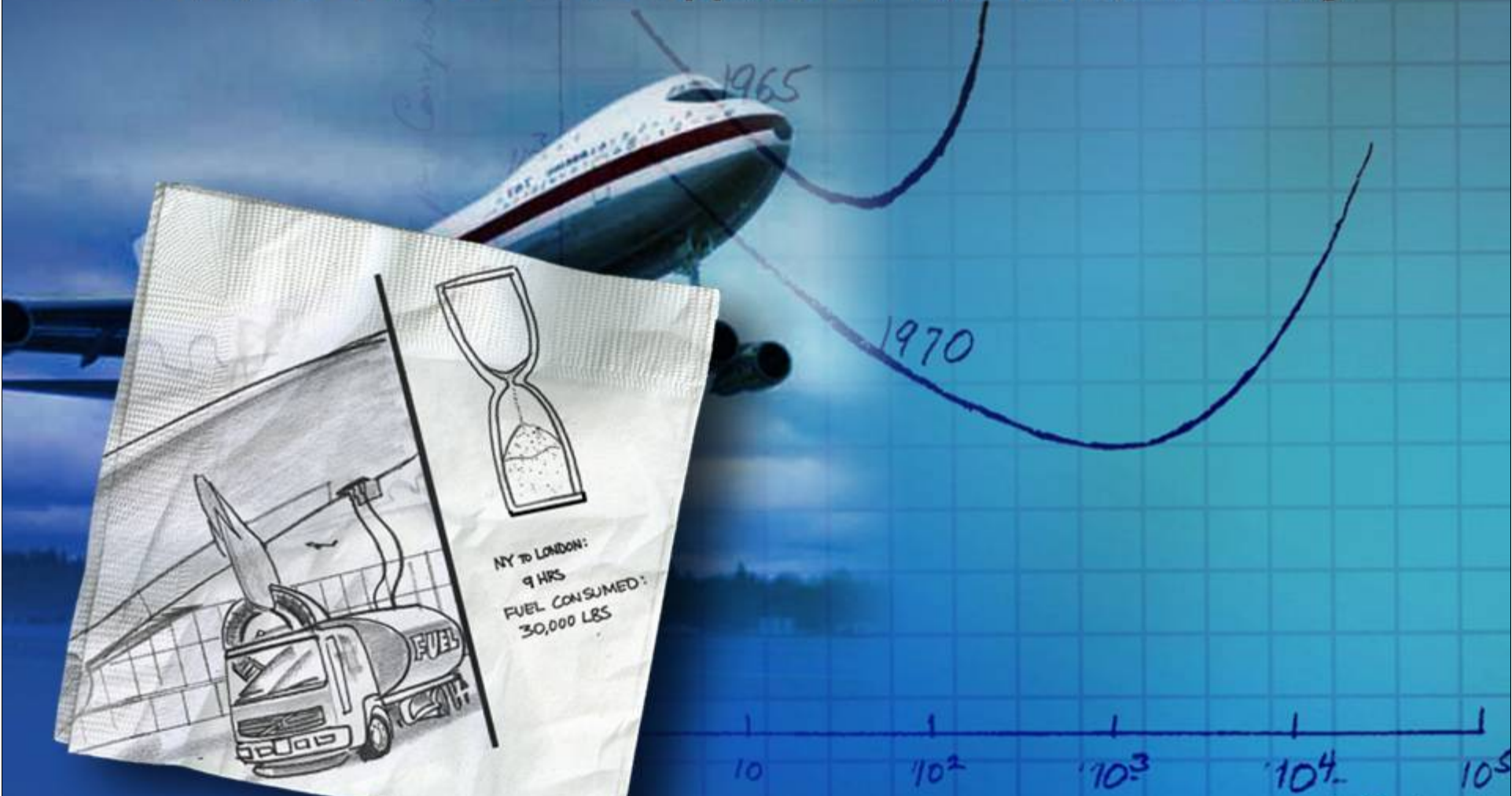


Number of Components per Integrated



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What If? Moore's Law Could Be Applied To The Airline Industry?



What If? Moore's Law Could Be Applied To The Airline Industry?



Product Cadence for Sustained Leadership

2005-06

Intel®
Pentium® D
Xeon®
Core™
Processors
65nm

TICK

Intel®
Core™ 2
Xeon®
Processors
65nm

TOCK



Driving Products to Deliver on Moore's Law

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ICE Cube* Modular Data Center on Wheels



*other brands and names are the property of their respective owners.

ICE Cube* Modular Data Center on Wheels

1400 Quad Core Intel® Xeon® Servers In A Single 40' Truck Container

80% Reduction In Cooling and Air Handler Power Costs

Efficient DC Power and Localized UPS

Flexible Site Selection, Scale and Power Options



*other brands and names are the property of their respective owners.

Product Cadence for Sustained Leadership

2007-08

Penryn
Processors
45nm

TICK

TOCK

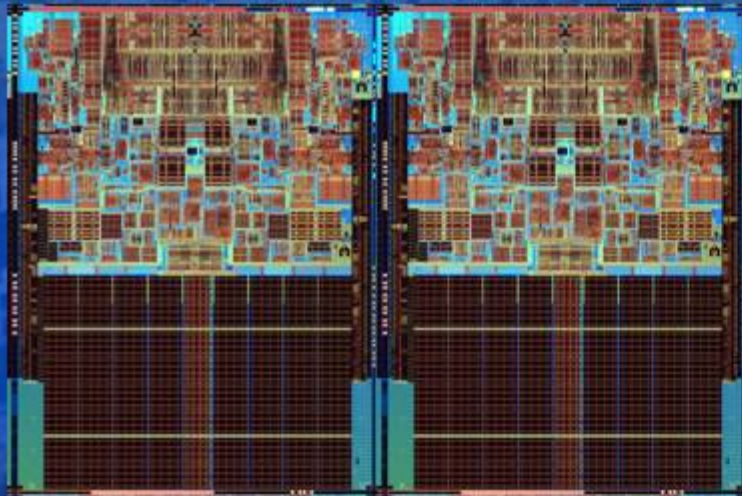


Driving Products to Deliver on Moore's Law

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45nm Advantage

Intel® Xeon® 5300 Processor
(Clovertown)
65nm

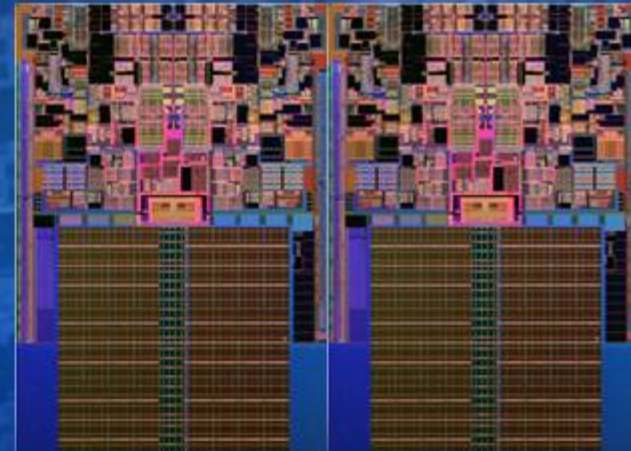


143 mm²*

143 mm²*

582m Transistors
8 MB Cache

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



107 mm²*

107 mm²*

820m Transistors
12 MB Cache

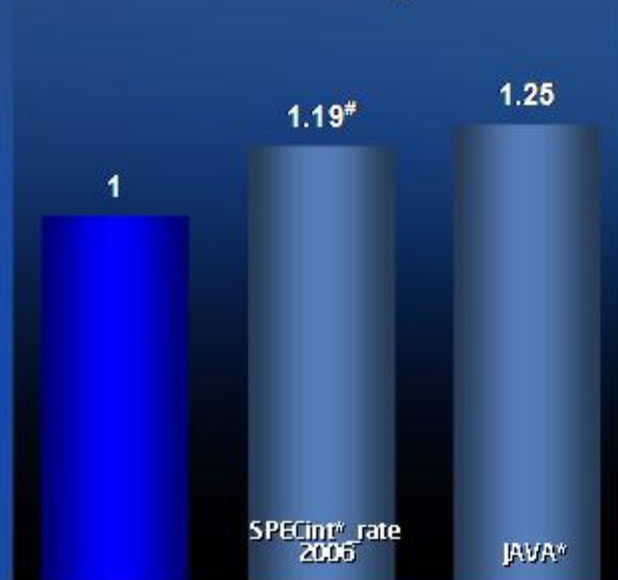


*Source: Intel
Note: die picture sizes are approximate

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45nm Hi-k Quad-Core Intel® Xeon® Processor 5400 Series Performance Comparisons

Extending Server Performance
Leadership



Quad-Core Intel
Xeon X5365
(3.0GHz)
1333 FSB

Quad-Core Intel
Xeon 5400
Series 3.16GHz
1333 FSB

Quad-Core Intel
Xeon 5400
Series 3.16GHz
1333 FSB



SPECint*_rate2006 and SPECfp*_rate2006 results on Quad-Core Intel Xeon 5400 series are Intel estimates based on internal measurements September 2007. All other Quad-Core Intel Xeon results are based on measured/published results. SPECfp*_rate2006 comparison data based on best reported 2 socket AMD and Intel results. Source for Quad-Core AMD Opteron®: www.amd.com. Quad-Core Intel Xeon Processor X5365: www.spec.org. Current as of 9/17/2007. Details in backup. SPEC, SPECint2006, SPECfp2006, SPECapc are trademarks of the Standard Performance Evaluation Corporation. See <http://www.spec.org> for more information.

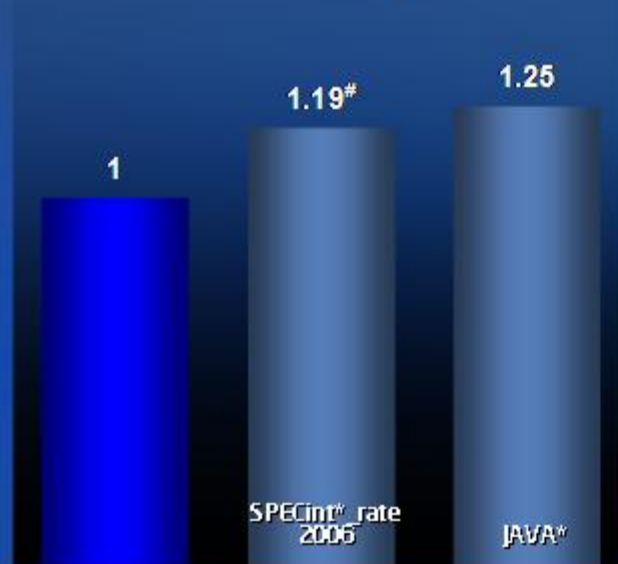
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1:AMD Source: http://www.amd.com/us-en/Processors/ProductInformation/0,30_118_8796_8800-119102,00.html

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45nm Hi-k Quad-Core Intel® Xeon® Processor 5400 Series

Performance Comparisons

Extending Server Performance Leadership

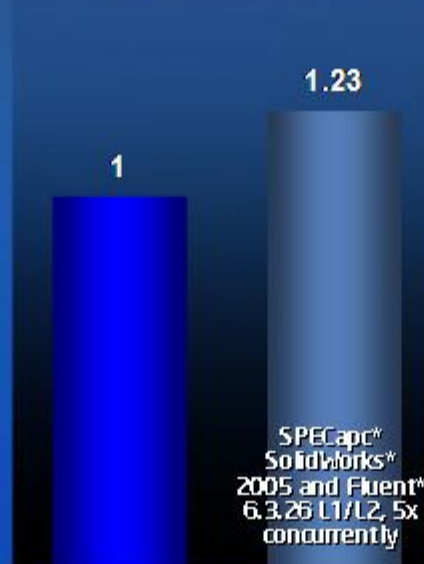


Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

Workstation Multitasking Enhancements



Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.20GHz
1600 FSB



SPECint*_rate2006 and SPECfp*_rate2006 results on Quad-Core Intel Xeon 5400 series are Intel estimates based on internal measurements September 2007. All other Quad-Core Intel Xeon results are based on measured/published results. SPECfp*_rate2006 comparison data based on best reported 2 socket AMD and Intel results. Source for Quad-Core AMD Opteron®: www.amd.com. Quad-Core Intel Xeon Processor X5365: www.spec.org. Current as of 9/17/2007. Details in backup. SPEC, SPECint2006, SPECfp2006, SPECapc are trademarks of the Standard Performance Evaluation Corporation. See <http://www.spec.org> for more information.

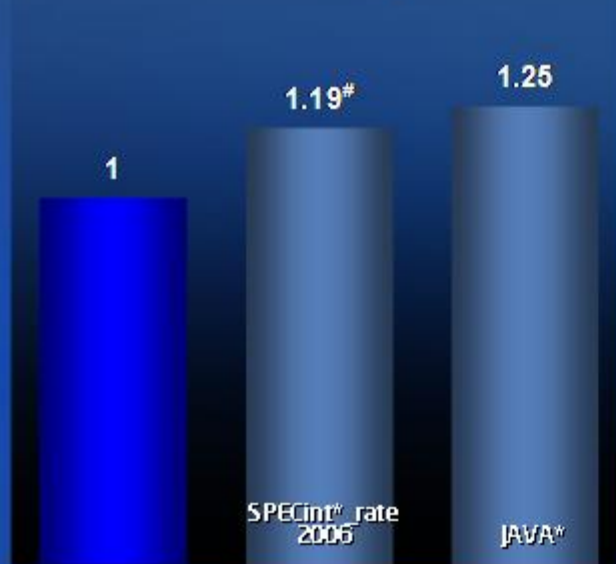
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1:AMD Source: http://www.amd.com/us-en/Processors/ProductInformation/0,30_118_8796_8800-119102,00.html

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45nm Hi-k Quad-Core Intel® Xeon® Processor 5400 Series

Performance Comparisons

Extending Server Performance Leadership

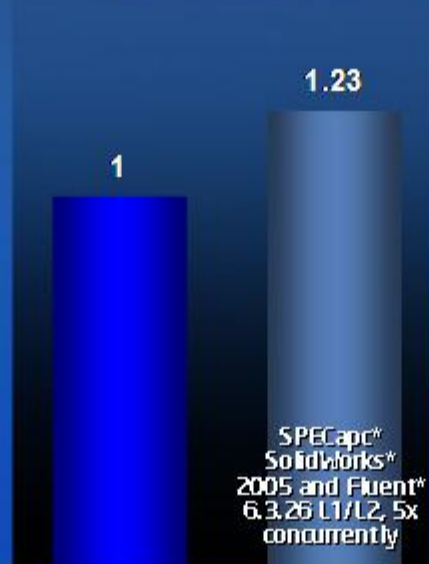


Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

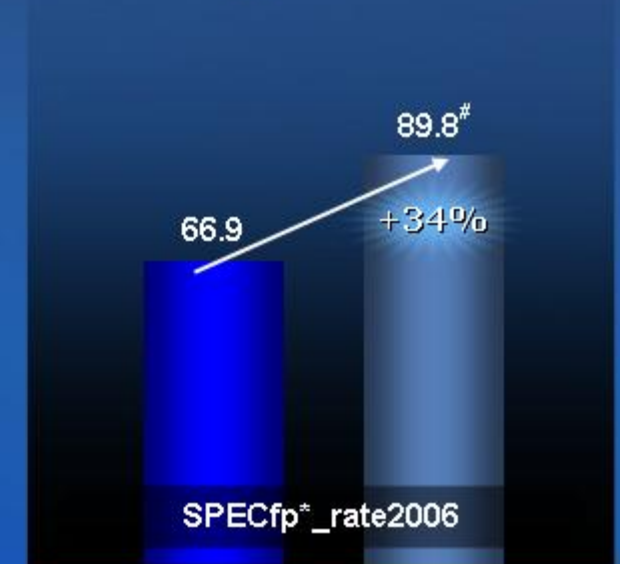
Workstation Multitasking Enhancements



Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.20GHz
1600 FSB

Leadership on Bandwidth Intensive Applications



Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.20GHz
1600 FSB

Extending Performance Leadership!



SPECint*_rate2006 and SPECfp*_rate2006 results on Quad-Core Intel Xeon 5400 series are Intel estimates based on internal measurements September 2007. All other Quad-Core Intel Xeon results are based on measured/published results. SPECfp*_rate2006 comparison data based on best reported 2 socket AMD and Intel results. Source for Quad-Core AMD Opteron: www.amd.com. Quad-Core Intel Xeon Processor X5365: www.spec.org. Current as of 9/17/2007. Details in backup. SPEC, SPECint2006, SPECfp2006, SPECapc are trademarks of the Standard Performance Evaluation Corporation. See <http://www.spec.org> for more information.

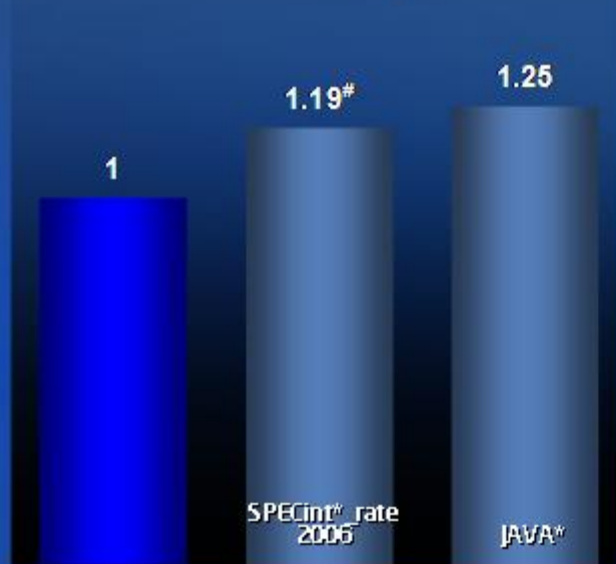
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1:AMD Source: http://www.amd.com/us-en/Processors/ProductInformation/0,30_118_8796_8800-119102,00.html

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45nm Hi-k Quad-Core Intel® Xeon® Processor 5400 Series Performance Comparisons

Extending Server Performance Leadership

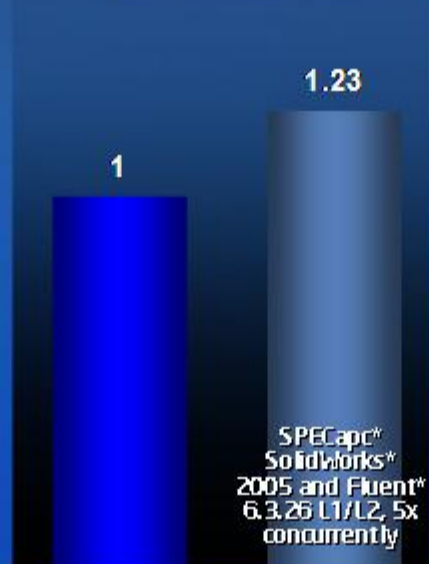


Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.16GHz
1333 FSB

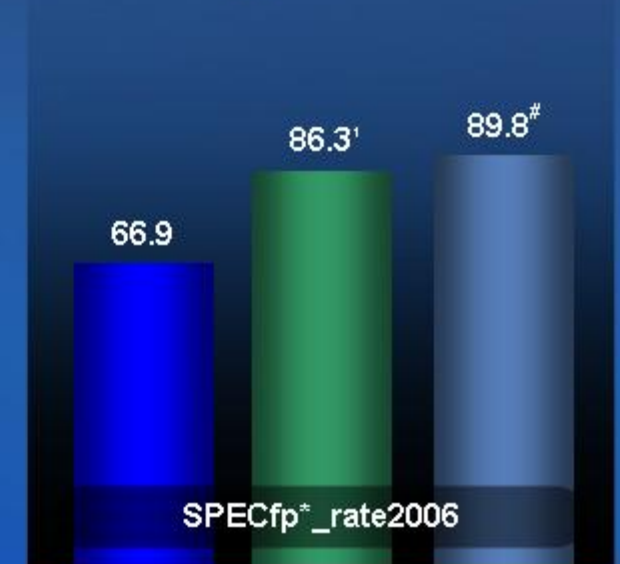
Workstation Multitasking Enhancements



Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core Intel Xeon 5400 Series
3.20GHz
1600 FSB

Leadership on Bandwidth Intensive Applications



Quad-Core Intel Xeon X5365
3.0GHz
1333 FSB

Quad-Core AMD Opteron 2360
2.5GHz

Quad-Core Intel Xeon 5400 Series
3.20GHz
1600 FSB

Extending Performance Leadership!



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1:AMD Source: http://www.amd.com/us-en/Processors/ProductInformation/0,30_118_8796_8800-119102,00.html

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Paradigm™
VISION FOR ENERGY

23-28 September, 2007 San Antonio, Texas
Booth #1812

Investors | Careers | Solutions | Consulting | Support | Knowledge | News Room | Contact Us

Seismic Data Processing & Imaging Solutions
Visualization, Interpretation & Modeling Solutions
Reservoir Characterization & Petrophysical Analysis Solutions
Well Planning & Drilling Solutions
Data Sharing & Interoperability Framework

earth decision™
Go To Earth Decision's Web Site

Paradigm™
VISION FOR ENERGY

PLAY THE NAME GAME
Name It and win it!
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Paradigm™
VISION FOR ENERGY

Alistair Downie
Manager,
Western Hemisphere R&D
Paradigm

Paradigm Advantage

Paradigm™ is a leading provider of enterprise software solutions for the global oil and natural gas exploration and production industry. Our software enables customers to locate new oil and gas reservoirs, optimize production from new and existing reservoirs, and create dynamic digital models of the Earth's subsurface.

Paradigm software solutions include Seismic Data Processing, Seismic Imaging, Visualization, Interpretation, Modeling, Reservoir Characterization, Petrophysical Analysis, Well Planning, and Production. Paradigm also provides strategic consulting services to help customers optimize their workflows and assist in realizing greater success in exploration and production activities.



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Range of 45nm Systems

Quad Core Intel® Xeon® 5400 Workstation

SkullTrail Media Elite

Core® 2 Extreme / X38 Gamer, Media Expert

2007 Intel vPro™
Processor Technology Biz Professional

Core® 2 Duo / G35 Mainstream

Purpose Built Platforms Optimized For Each Segment



Product Cadence for Sustained Leadership

2007-08

Penryn
Processors
45nm

TICK

Nehalem
Processors
45nm

TOCK



Driving Products to Deliver on Moore's Law

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Spring IDF 2007

"45-nm Tock" – Nehalem

Dynamic Scalability for Efficient Performance on Demand

Fully
Unlocks
Intel 45 nm
High-k
Silicon
Benefits

Leverages 4
Issue Intel®
Core™ Micro-
architecture
Technology

Dynamically
Managed
Cores/
Threads/
Caches

Simultaneous
Multi-
threading

Multi-level
Shared Cache
Architecture

Performance
Enhanced
Dynamic
Power
Management

Design Scalability Optimizes for Each Market Segment

New System
Architecture

Includes
QuickPath
Architecture

Scalable &
Configurable
Cache,
Interconnects &
Memory
Controllers

Optional High
Performance
Integrated
Graphics For
Client

Scalable
Performance:
1 to 16+
Threads &
1 to 8+ Cores

Initial Products
in Production in
'08



All product information and dates are preliminary and subject to change without notice

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ISA Innovation Continues ...

SSE4.2

**Efficient Accelerated String
and Text Processing**

Implemented in Nehalem

256 compares in one instruction

Financial Market Data Parser

- 75% reduction in instructions
- >3x performance increase

AES-NI

**Instructions To Accelerate AES
Encryption And Decryption**

Implemented in Westmere

>3x performance improvement

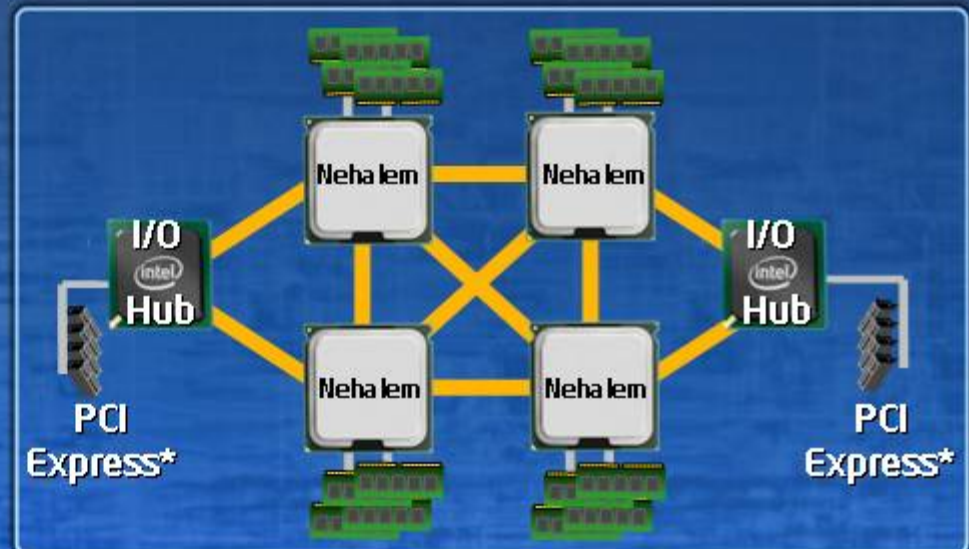
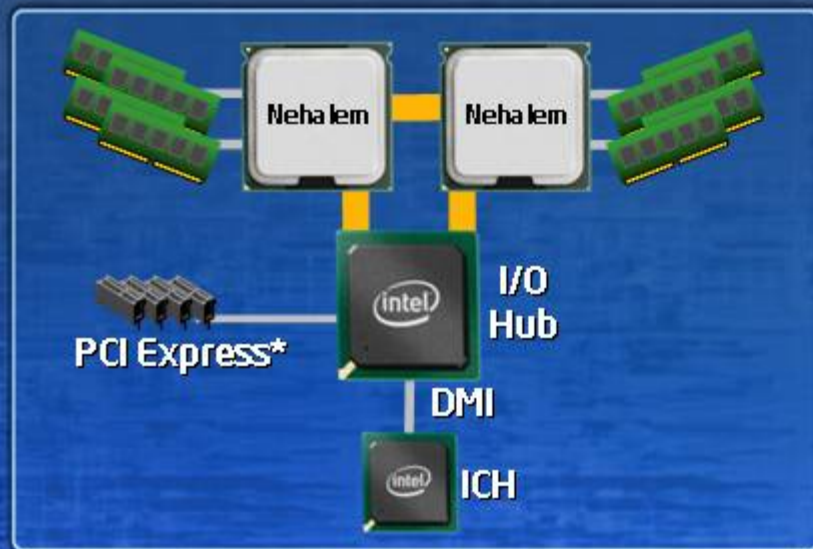
- Enables broad use of AES
- Improves security
- Simplifies software



* Intel preproduction Server platform with two 64-bit Intel® Xeon™ processors 3.60 GHz with 2MB L2 Cache and 800 MHz system bus and 8GB (8x1024 MB) DDR2-400 memory, Microsoft Windows Server 2008 Enterprise Edition. Measured at J1114 SPECintB2005_BOPS. Results published by Principled Technologies at http://www.principledtechnologies.com/clients/reports/Intel/W5SPECintB2005_DS06.pdf as of May 23, 2006.

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Nehalem Based System Architecture



— Intel QuickPath Interconnect

2, 4, 8 Cores

4, 8, 16 Threads

Intel® QuickPath Architecture

Integrated Memory Controller

Buffered or Un-buffered Memory

*Optional Integrated Graphics

Intel® QuickPath Architecture Industry Momentum



Agilent Technologies



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Jim Brayton
Nehalem Project Manager
Intel Corporation



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Product Cadence for Sustained Leadership

2009-10

WESTMERE
Processors
32nm

TICK

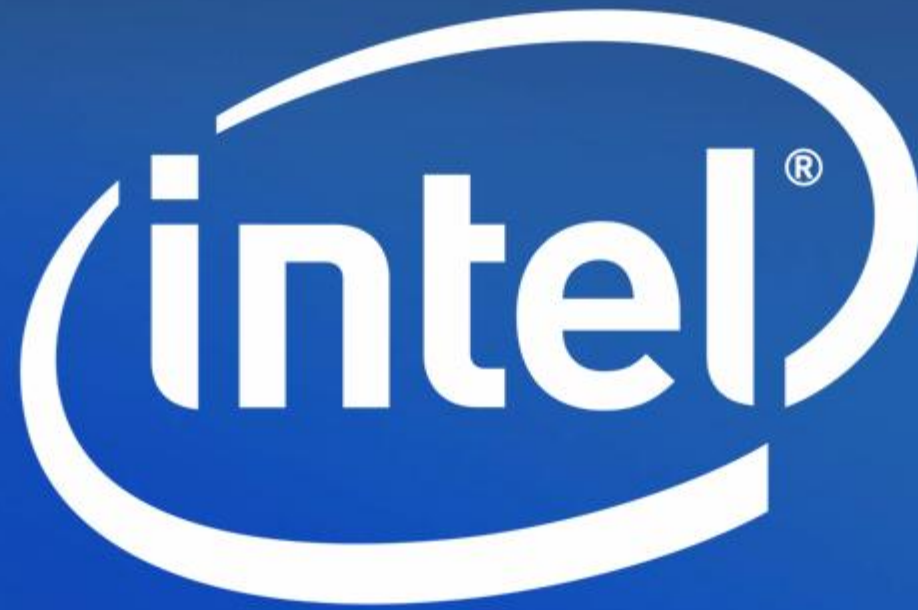
**Sandy
Bridge**
Processors
32nm

TOCK



Driving Products to Deliver on Moore's Law

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Risk Factors

This 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.



Rev. 4/17/07

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45nm Hi-k Intel® Xeon® Quad-Core Processor

Performance and Energy Efficiency Comparisons configuration details

- **Extending Server Performance Leadership**
 - **SPECint_rate2006**
 - Quad-Core Intel Xeon processor X5365 based platform details: Supermicro* X7 DBB with two Quad-Core Intel Xeon processors X5365 3.0GHz, 16 GB memory (8x2GB), 1333 FSB, O/S 64-Bit SUSE Linux Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64, Intel C++ Compiler for Linux version 10.1 & Smart Heap Library Version 8.1. Published at www.spec.org as of September 4th 2007.
 - 45nm Hi-k Intel Xeon Quad-Core processor 3.16GHz based platform details: Intel pre-production platform with two 45nm Hi-k Intel Xeon Quad-Core processors 3.16GHz, 1333 FSB, 16 GB memory (8x2GB), O/S 64-Bit SUSE Linux Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64, Intel C++ Compiler for Linux version 10.1 & Smart Heap Library Version 8.1.
 - **Java (Server side Java* benchmark)**
 - Quad-Core Intel Xeon processor X5365 based platform details: Intel pre-production platform with two Quad-Core Intel Xeon processors X5365 3.0GHz, 16 GB memory (8x2GB), 1333 FSB, Microsoft Windows Server* 2003 Enterprise x64 Edition + SP1 (64-bit), BEA* JRockit* 5.0 P27. Result measured with 4 JVM instances.
 - 45nm Hi-k Intel Xeon Quad-Core processor 3.16GHz based platform details: Intel pre-production platform with two 45nm Hi-k Intel Xeon Quad-Core processors 3.16GHz, 16 GB memory (8x2GB), 1333 FSB, Microsoft Windows Server* 2003 Enterprise x64 Edition + SP1 (64-bit), BEA* JRockit* 5.0 P27. Result measured with 4 JVM instances.
- **Leadership on Bandwidth Intensive Application**
 - **SPECfp_rate2006**
 - Quad-Core AMD Opteron 2360SE based platform details: Result published at www.amd.com at http://www.amd.com/us-en/Processors/ProductInformation/0_30_11B_8796_8300-11510200.html. x Quad-Core AMD Opteron™ processors Model 2360 SE in Supermicro HBDMU+ motherboard, 16GB (8x2GB DDR2-667 memory), 250GB Seagate SATA disk drive, SuSE Linux Enterprise Server 10 SP1 64-bit kernel as of Sept 13, 2007. Result published at 86.3
 - Quad-Core Intel Xeon processor X5365 based platform details: Supermicro* X7 DBB with two Quad-Core Intel Xeon processors X5365 3.0GHz, 16 GB memory (8x2GB), 1333 FSB, O/S 64-Bit SUSE Linux Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64, Intel C++ Compiler for Linux version 10.1 & Smart Heap Library Version 8.1. Published at www.spec.org as of September 4th 2007 at 66.9.
 - 45nm Hi-k Intel Xeon Quad-Core processor 3.20GHz based platform details: Intel pre-production platform with two 45nm Hi-k Intel Xeon Quad-Core processors 3.20GHz, 1600 FSB, 16 GB memory (8x2GB), O/S 64-Bit SUSE Linux Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64, Intel C++ Compiler for Linux version 10.1 & Smart Heap Library Version 8.1. Result measured at 89.8.
- **Workstation Multi-Tasking Enhancements - Manufacturing "Working Differently" scenario SPECcap* SolidWorks* 2005 and Fluent* 6.3.26 L1/L2 workloads running 5x concurrently**
 - 2x Quad-Core Intel® Xeon® Processor 5400-series (3.20 GHz, 1600 MHz FSB, 12 MB cache, formerly "Harpertown") on "SunCity Stoakley" pre-production workstation compared to 2x Quad-Core Intel Xeon Processor X5365 (3.00 GHz, 1333 MHz FSB, 8 MB cache) on SuperMicro* X7 DAB workstation, COMMON: 8 GB FBD-667 memory, WDC WD740GD HDD, Windows XP* Professional x64 SP1, NVIDIA* Quadro* FX 4500 PCIe* x16 video card driver 91.36.



All results as of September 17, 2007

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