

Dell Precision™ Workstation

The New Technologies Enable More Realism with 64bit

DELL International Inc.
Brand Marketing
최 주 열

Full 64bit system Launch Themes & Key Messages



- **Dell themes:**

- “Driving standardization to speed innovation & to deliver real customer value”
- “Now in an inflection point of customer choice – the convergence of standards-based hardware, software, and the enabling Microsoft OS”

- **Precision themes:**

- “Freedom to create with our compromise”
- “Design bigger, animate with more realism, explore to limits of your physical & virtual environment”



- **Key Value Proposition:**

- Access to massive memory for nearly real-time rendering
- Maintain performance & compatibility with existing 32-bit applications





**It's a Good Time to Be
implementing
Standards-based Solutions!**

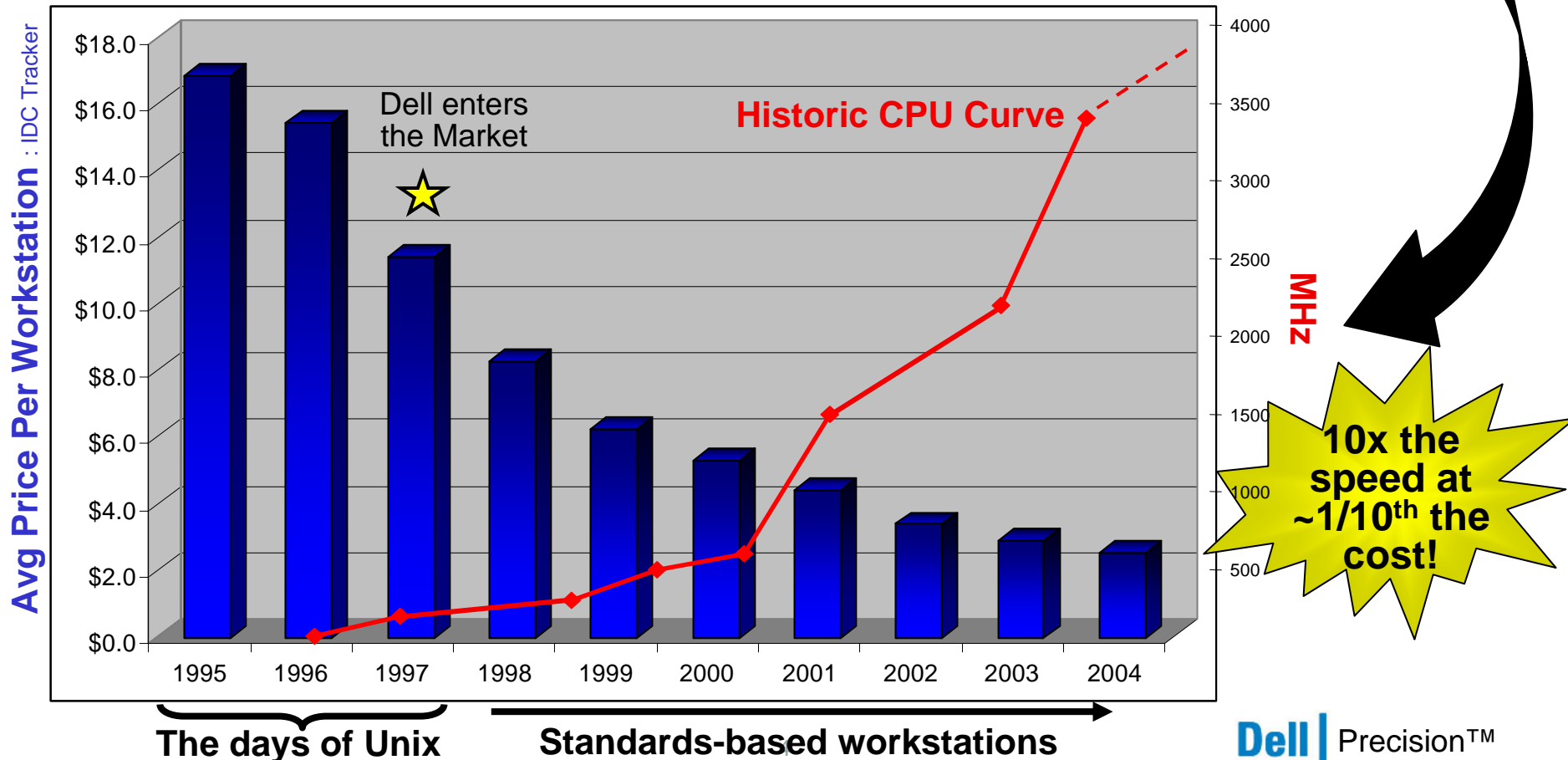
With Standardization Costs Decline

- **Shared basic architecture extends usage, drives adoption**

- Advances continue to support innovation:

- **1985: 100k transistors** ⇒ ⇒ ⇒ **2005: 150 million transistors**

- Leveraging standards drops costs, but competition also dropped *prices*



A Free Market Is Forced To Innovate Faster

- **Competition Drives Innovation**

| | Then | NOW |
|-------------------|------------------------|---|
| Software | 2D data | 3D visualization |
| Processors | 50 MHz, single thread | 3600 MHz, multithreaded |
| Graphics | 2D, 5 GFLOPs | 3D, 500 GFLOPs, Programmable |
| I/O | ISA, 16 MB/s | PCIe x16, 8 GB/s |
| Storage | IDE | SATA |
| Comms | 10Mbit shared Ethernet | 1Gbit switched Ethernet |

- **PLUS...**

Optimizations in Business, Manufacturing, Workplace

Key Benefits of Transitioning from 32-bit to 64-bit (XP64)

“Design Without Compromise”

- **Lower costs without sacrificing performance**

- 64-bit computing at 32-bit platform costs
 - Maintain full compatibility & performance for existing 32-bit applications
 - Higher productivity, faster TTM
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- **Increased design flexibility**

- Work with larger data sets at a single workstation for streamlined workflow
 - View, analyze, and manipulate larger data sets on a single workstation
 - Ease of expansion for growth & new technology as needs change
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- **Deliver solid manageability and availability**

- Maintaining standards-based x86 architecture simplifies support & systems management
- Make changes real time, with minimal impact



Lower Costs



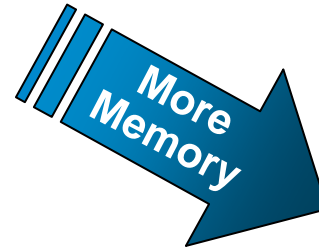
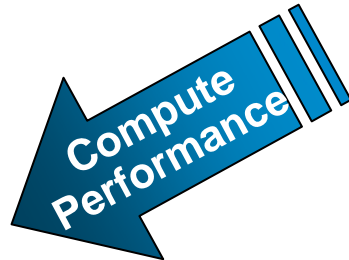
Higher Efficiency & ROI



The Power of True,
Standards-Based 64-Bit
Computing is Here Now!

Dell Precision Architecture - True 64-bit Computing

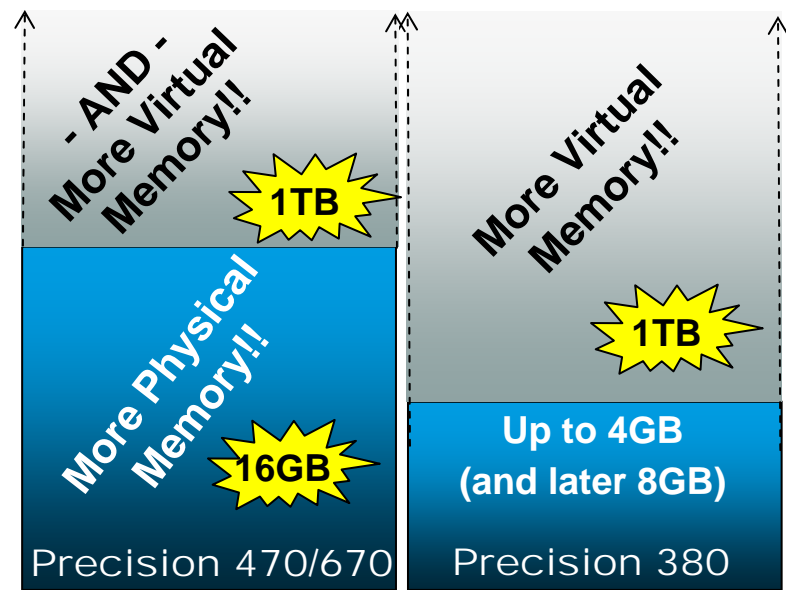
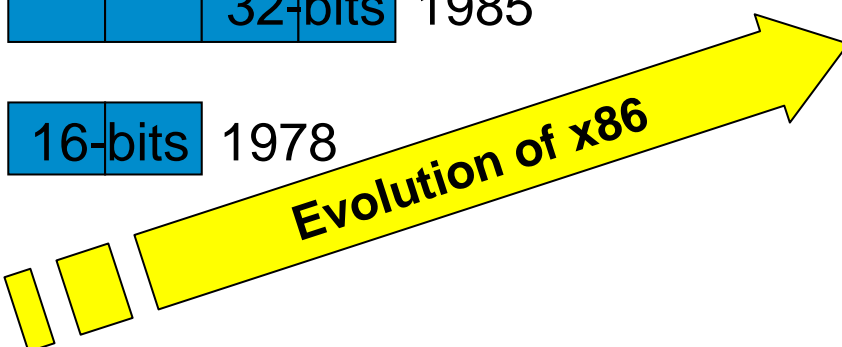
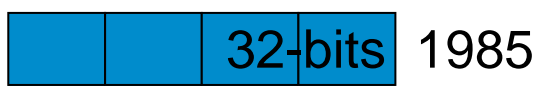
64-bit environments are defined by two primary features



Ability store, process & output 2x the data in 64-bit chunks

Addressability > 4GB

- Access physical & virtual memory well beyond the limitations of the OS or physical system



All Dell Precision desktops are “64-bit ready” means customers can harness the power of 64-bit anytime they’re ready!

Dell Precision 64-bit Platform Positioning

Xeon
470/670



➔ “The lead 64-bit conversion platform”

– 64-bit Value Proposition

- ✓ 2-4x the memory support of P4 systems
- ✓ Performance w/ nearly real-time access in memory
- ✓ More expansion & upgradeability

– For which users:

- Who are doing:
 - Large model rendering
 - Complex DCC
 - Finite analysis, or data-pulls from large databases
 - Developing apps for the XP64 OS
- Or who want to transition from Unix

P4 380



➔ “64-bit capable” for entry applications

– 64-bit Value Proposition:

- ✓ Increased productivity relative to standard desktops for entry 64-bit apps

– For which users:

- Entry MCAD, DCC

64-bit Without Impact to Existing Infrastructures

- Unlike RISK, Unix or IA-64 architectures, Precision 64-bit enabled systems:
 - 1.) Run 32-bit operating systems applications seamlessly
 - 2.) Without performance penalty



- In 64-bit OS mode:
 - 1.) 64-bit applications run simultaneously
 - 2.) With outstanding 64-bit performance
 - 3.) With access to large memory expansion

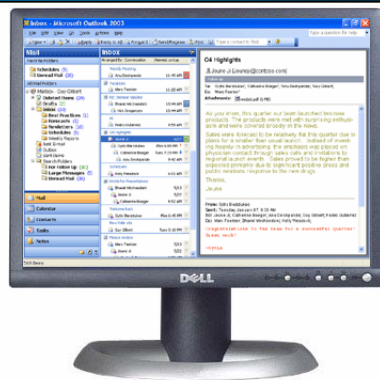
Load 32-bit OS

- OR -

Load 64-bit OS

32-bit applications

- MS Office
- Current CAD, DCC applications



64- AND 32-bit applications

- MS Office
- Current CAD, DCC applications

Plus...

- Large models
- Complex content creation



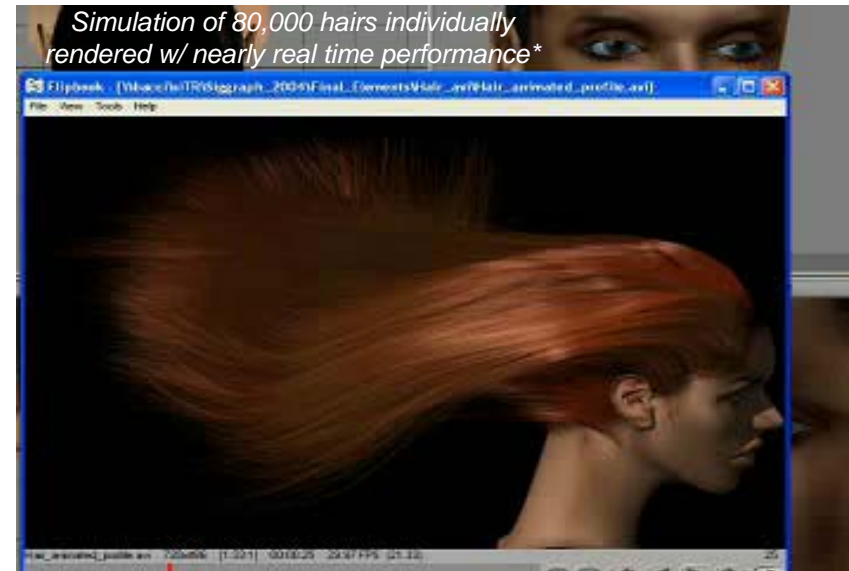
NOTE: No penalty to purchasing a 64-bit enabled system at XP64 launch even for customers whose 64-bit enable applications will follow!

64 Bit Performance vs. 32Bit

- 3D model consists of over 80,000 individual hairs animated individually
 - Each hair that passes in front of the model's face is required to cast it's own shadow resulting in additional hair models beyond 80K.



SoftImage XSi
Windows XP 32bit
Precision 650
3GB Memory
(Animation resolution = 640x480)



SoftImage XSi
Windows XP 64bit (Beta)
Precision 670
6GB Memory
(Animation resolution = 1024x768)

** Based upon a preview of a native 64-bit version of SOFTIMAGE® XSi®
3D animation software on an Intel-based dual core prototype*

Where To Find WS Users Who Are Ready for 64-bit...?

| Professionals | Who Work In Which Industry | Using What Type of Application |
|-------------------------------------|--|---|
| Electrical Engineers | Electronics, Computer Industry | <ul style="list-style-type: none"> • Electronic Design Automation (EDA) |
| Mechanical Engineers | Automobile, Aerospace | <ul style="list-style-type: none"> • Mechanical Computer Aided Design (MCAD) |
| Military | Defense | <ul style="list-style-type: none"> • Geographic Info Systems (GIS) • Computer Aided Design (CAD) • Battle Simulation |
| Scientists | Universities, Government Agencies, Research Institutes | <ul style="list-style-type: none"> • Climate Simulation • Finite Analysis (ex: crash testing) |
| Petroleum Engineers | Oil companies; Seismic Service | <ul style="list-style-type: none"> • Seismic processing • Visualization, topological mapping |
| Digital Animators | Motion Picture, Cartoon, Gaming | <ul style="list-style-type: none"> • Video editing • Computer Generated Imaging (CGI) |
| Doctors, Medical Techs | Healthcare | <ul style="list-style-type: none"> • Medical Imaging Systems (MIS) • 3D modeling |
| Print Media, Digital Artists | Publishing & Prepress | <ul style="list-style-type: none"> • Digital Content Creation (DCC) • Re-touching, editing |
| Financial Analysts/Traders | Banks, Brokerages, Insurance | <ul style="list-style-type: none"> • Spreadsheets • Real time financial data feeds |
| Architects | Construction, Design | <ul style="list-style-type: none"> • CAD |

Any workstation customer who is working with large, complex data sets



Thank you for your time