
Intel Architecture
Workstations
August 1996
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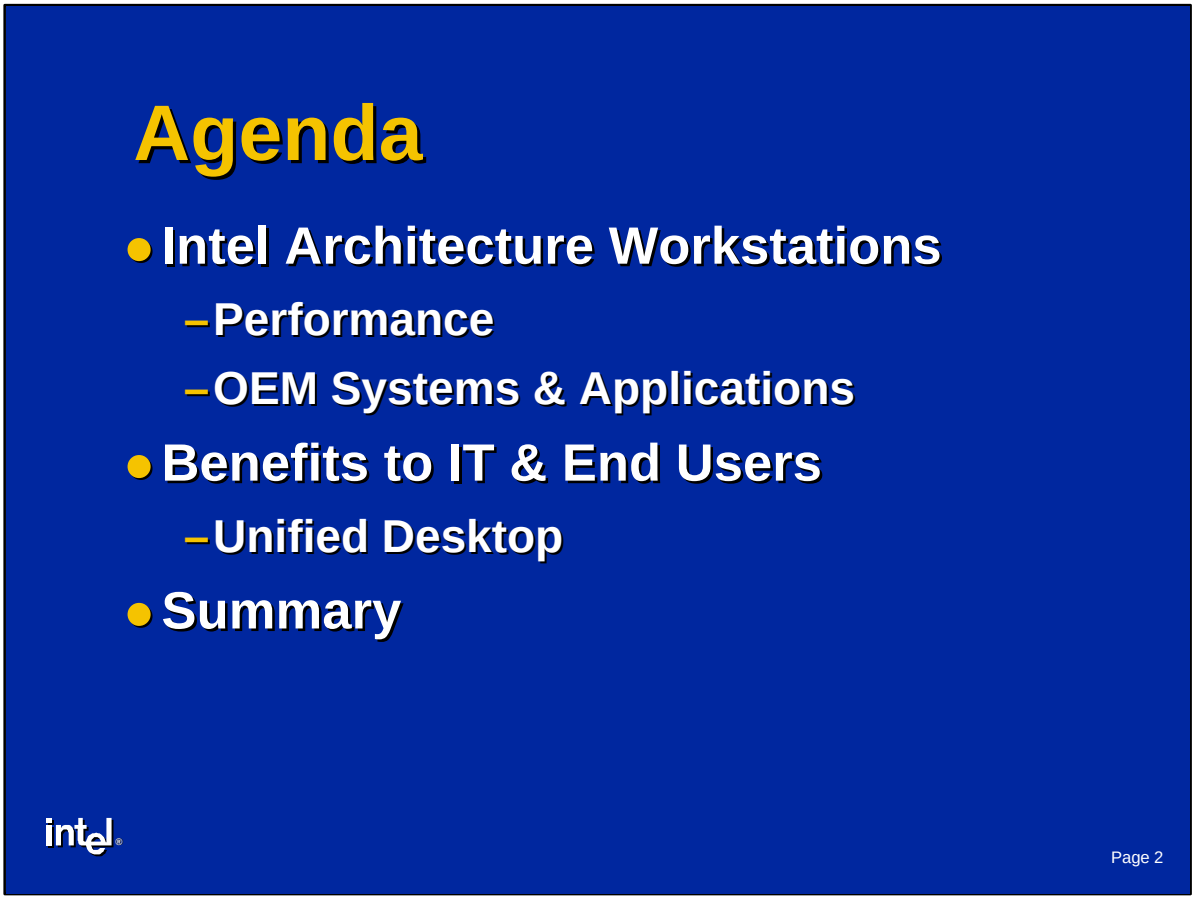
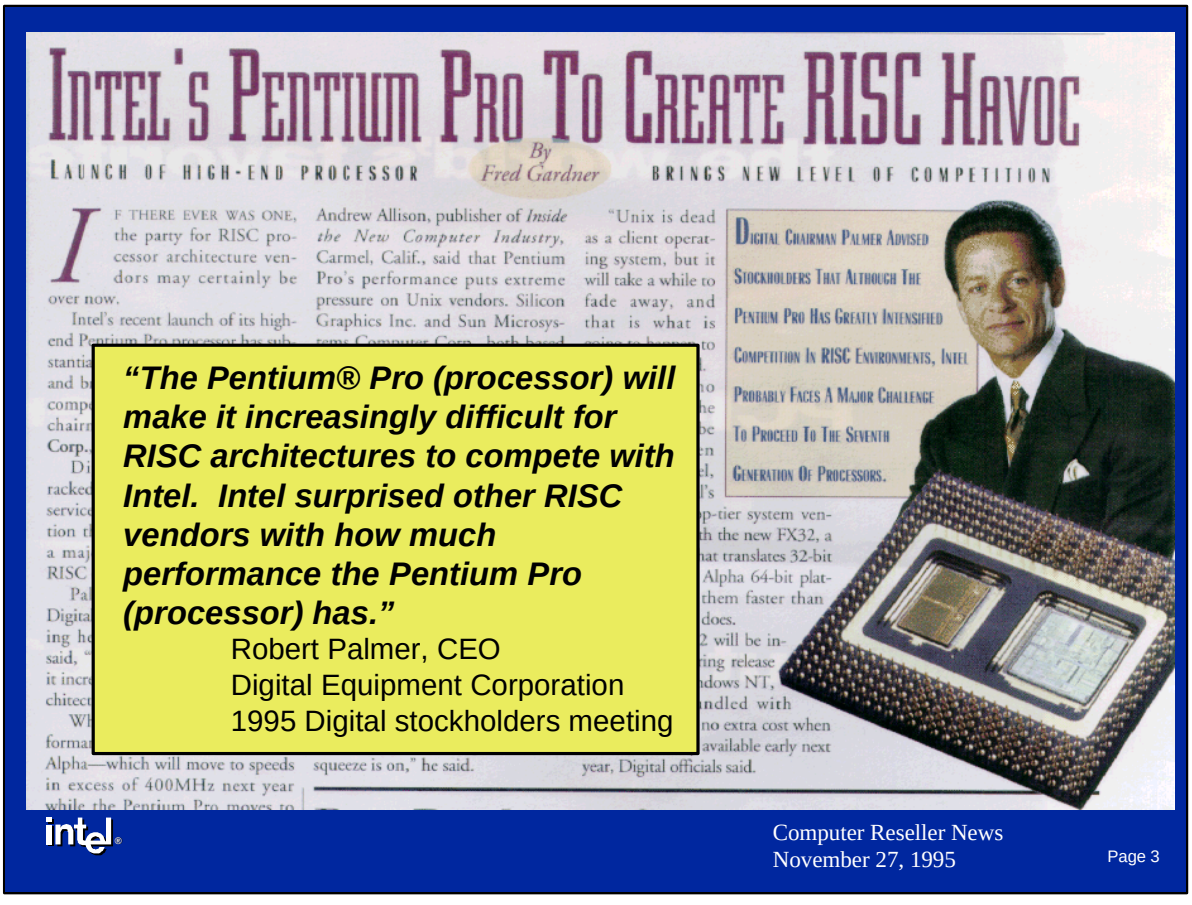


- The main points are:

-- Intel Architecture workstations deliver good performance at attractive price points.

-- Many OEM systems and workstation-class applications are available today.

-- IT and end users will benefit from having a unified desktop.



INTEL'S PENTIUM PRO TO CREATE RISC HAVOC

LAUNCH OF HIGH-END PROCESSOR By Fred Gardner BRINGS NEW LEVEL OF COMPETITION

IF THERE EVER WAS ONE, the party for RISC processor architecture vendors may certainly be over now.

Intel's recent launch of its high-end Pentium Pro processor has substantia... and b... compe... chairs... Corp.

Di... racked... servic... tion t... a maj... RISC...

Pa... Digita... ing h... said, "... it incr... chitect...

Wi... forma... Alpha—which will move to speeds in excess of 400MHz next year while the Pentium Pro moves to

Andrew Allison, publisher of *Inside the New Computer Industry*, Carmel, Calif., said that Pentium Pro's performance puts extreme pressure on Unix vendors. Silicon Graphics Inc. and Sun Microsys... squeeze is on," he said.

"Unix is dead as a client operating system, but it will take a while to fade away, and that is what is ... to ... to ... he ... be ... en ... el, ... 's ... p-tier system ven... th the new FX32, a ... at translates 32-bit Alpha 64-bit plat... them faster than ... does. ... 2 will be in... ing release ... dows NT, ... ndled with ... no extra cost when ... available early next year, Digital officials said.

DIGITAL CHAIRMAN PALMER ADVISED STOCKHOLDERS THAT ALTHOUGH THE PENTIUM PRO HAS GREATLY INTENSIFIED COMPETITION IN RISC ENVIRONMENTS, INTEL PROBABLY FACES A MAJOR CHALLENGE TO PROCEED TO THE SEVENTH GENERATION OF PROCESSORS.

"The Pentium® Pro (processor) will make it increasingly difficult for RISC architectures to compete with Intel. Intel surprised other RISC vendors with how much performance the Pentium Pro (processor) has."

Robert Palmer, CEO
Digital Equipment Corporation
1995 Digital stockholders meeting

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Computer Reseller News
November 27, 1995

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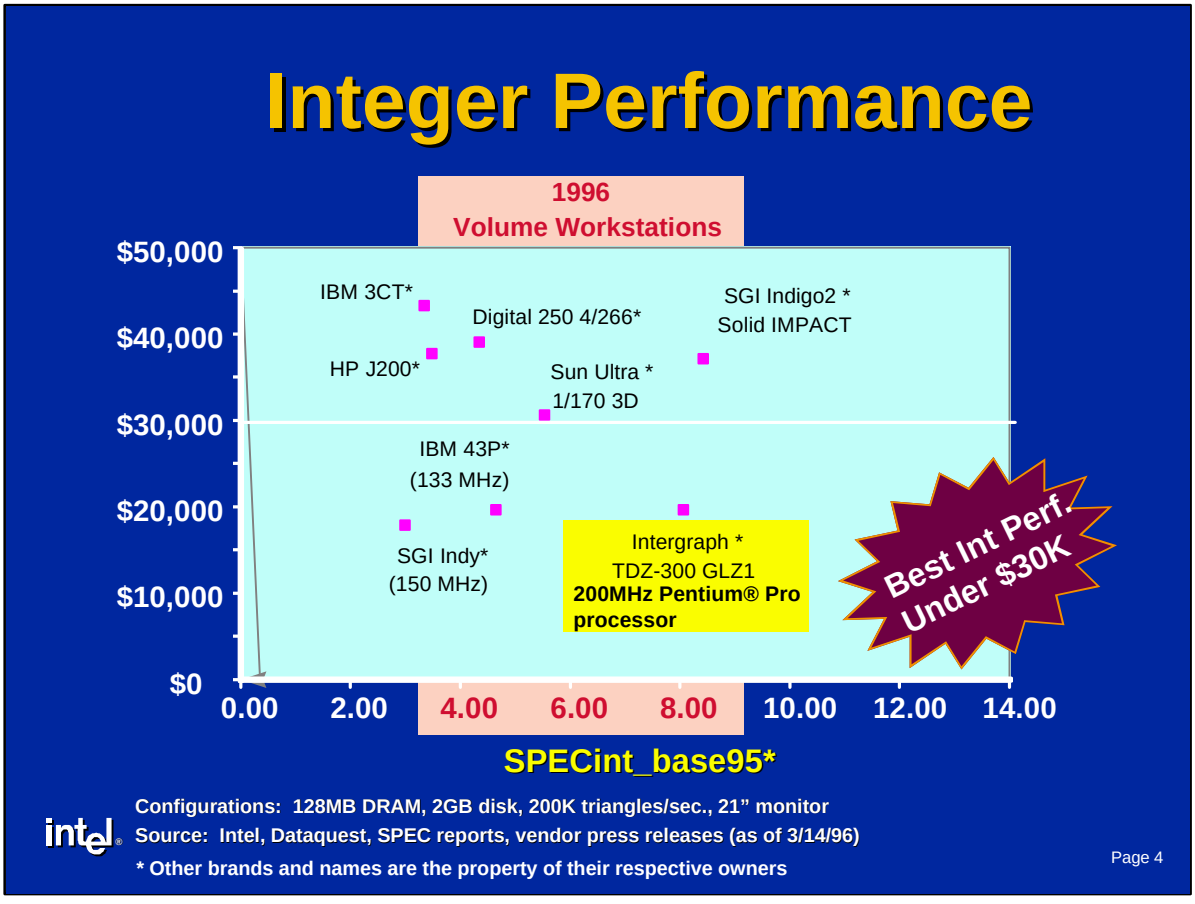
- **Bob Palmer's quote on the competitiveness of the Pentium® Pro processor vis-a-vis RISC processors**



- **Pentium® Pro processor based workstation delivers best integer performance for all workstations under $30K. In fact, it is faster than most of the more expensive workstations priced above $30K!**
- **System price is on the vertical axis. Integer performance is on the horizontal axis. The horizontal line in the middle is the $30K price point.**
- **SPECint_base95* numbers are from the SPEC* web site: http://www.specbench.org/osg/cpu95/results/**
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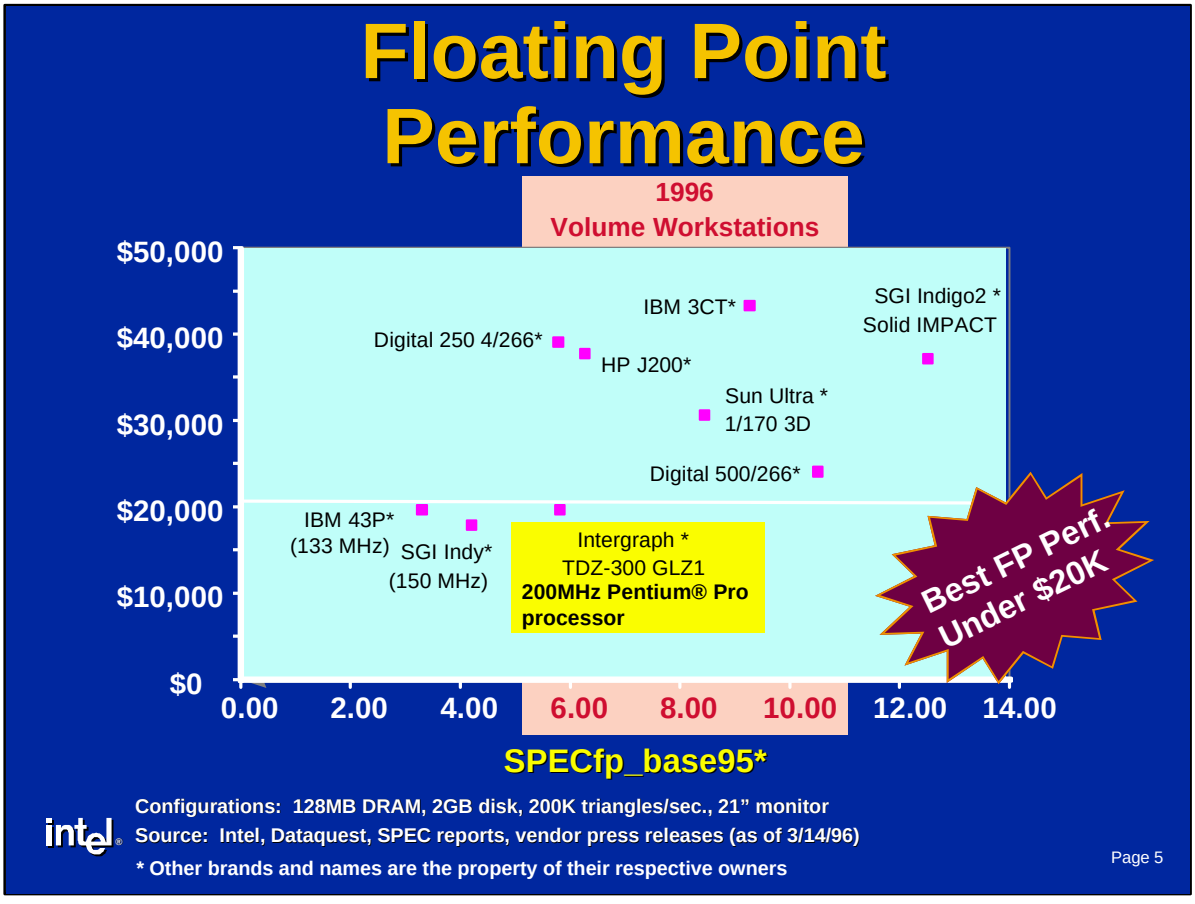
- ***Other brands and names are property of their respective owners.**



- **Even on floating point, Pentium® Pro processor based workstation is competitive.**
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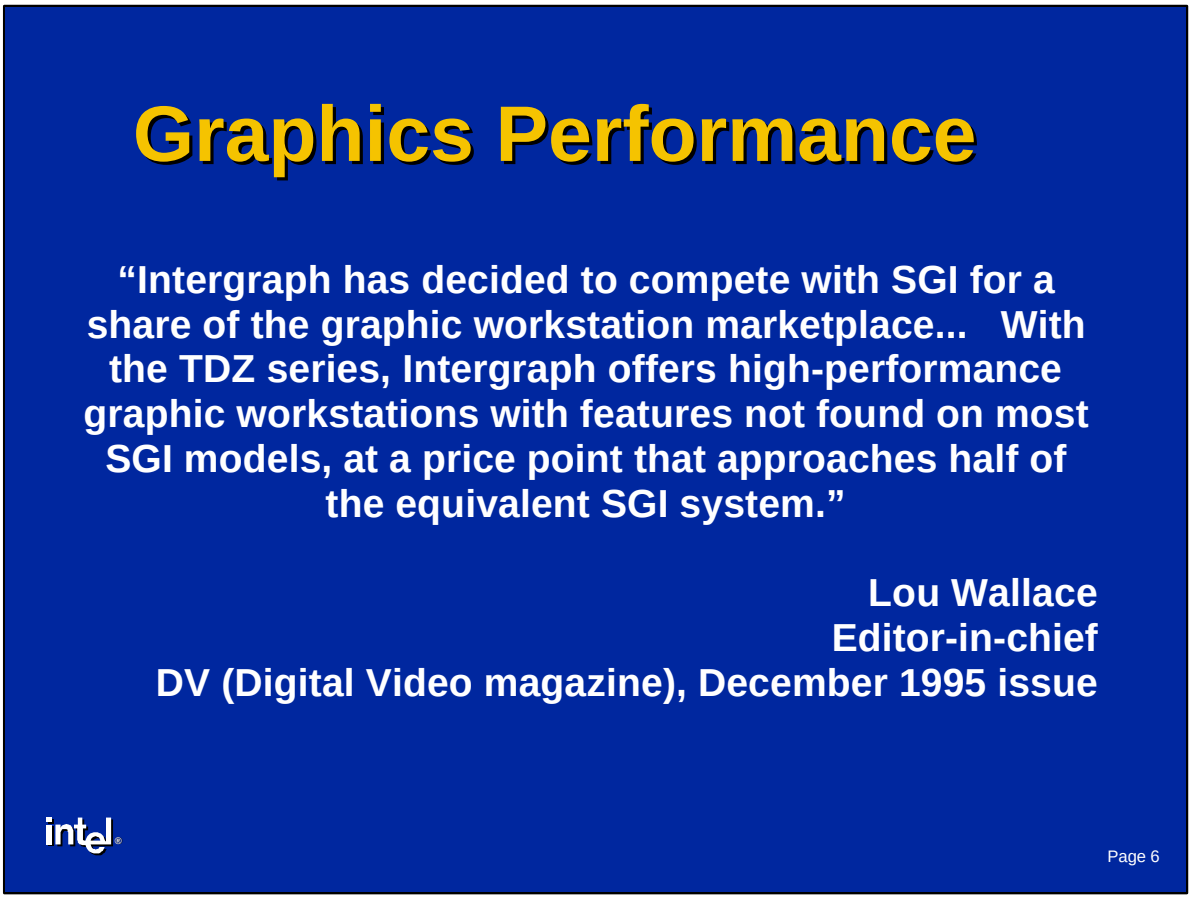

- **Intel architecture based workstations offer state-of-the-art graphics capabilities comparable to SGI graphics workstations**
- **For Intel architecture based workstations, 3D and OpenGL* graphics now make available as modular accelerators with performance suitable for volume workstations -- 200K triangles/sec**
  - ✓ AccelGraphics*, and Evans & Sutherland* are close working partners. These are independent hardware vendors specializing in high end graphics.
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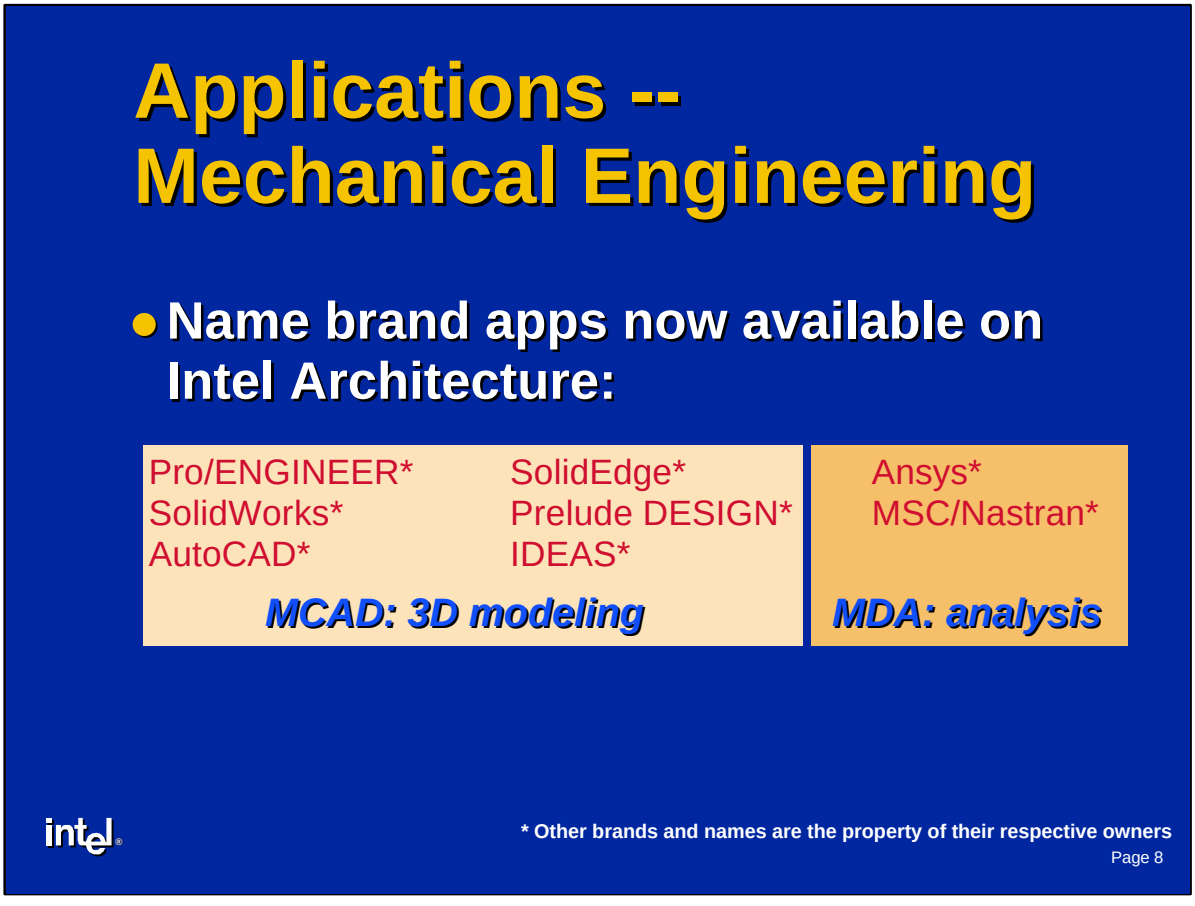
- These are the OEMs that have introduced Pentium® Pro processor based workstations -- some are already very well known in the workstation user community
- Their systems are performance-optimized, and their marketing messages support a focus on workstations users who require maximum productivity



- **This is the largest workstation application market**
- **Historically these apps were not available on Intel architecture. Most were announced in 2H94-1995. Pentium® processor based machines run these apps well, but Pentium Pro processor machines are fantastic. Users at tradeshows and user groups have been amazed by how well Pentium Pro processor based workstations run these apps.**
- **Details on Apps**
  - ✓ Pro/Engineer*, Parametric Technology Corp., $9500 and up, mechanical engineering automation tools based on solid modeling technology. Capabilities include part design, assembly design, design documentation / drawing.
  - ✓ SolidWorks*, SolidWorks Corp., $3995, Solid modeling mechanical design system.
  - ✓ AutoCAD*, Autodesk, Inc., $3995, 2D/3D CAD, drafting and detailing with integrated 3D solid modeling.
  - ✓ SolidEdge*, Intergraph Corp., $5995, CAD software on mechanical assembly & part modeling.
  - ✓ Prelude DESIGN*, Matra Datavision Inc., $7000, Solid modeling and drafting software targeted at mechanical design and drafting market.
  - ✓ IDEAS*, Structural Dynamics Research Corp, $6000-$70000, Mechanical CAE/CAD/CAM system which automates mechanical product development process from design through drafting, simulation, testing, and manufacturing.
  - ✓ Ansys*, ANSYS, Inc., integrated design analysis package for mechanical engineer. Allows AutoCAD user to analyze integrity of designs. Features geometric modeling, meshing, 2D plane stress, 3D plane stress, etc.
  - ✓ MSC/Nastran*, The MacNeal-Schwendler Corp., $4995, General purpose finite element analysis program with integrated graphical user interface used by engineers and designers. Analyzes stress, vibration, dynamics, and heat transfer characteristics of structures and mechanical components.
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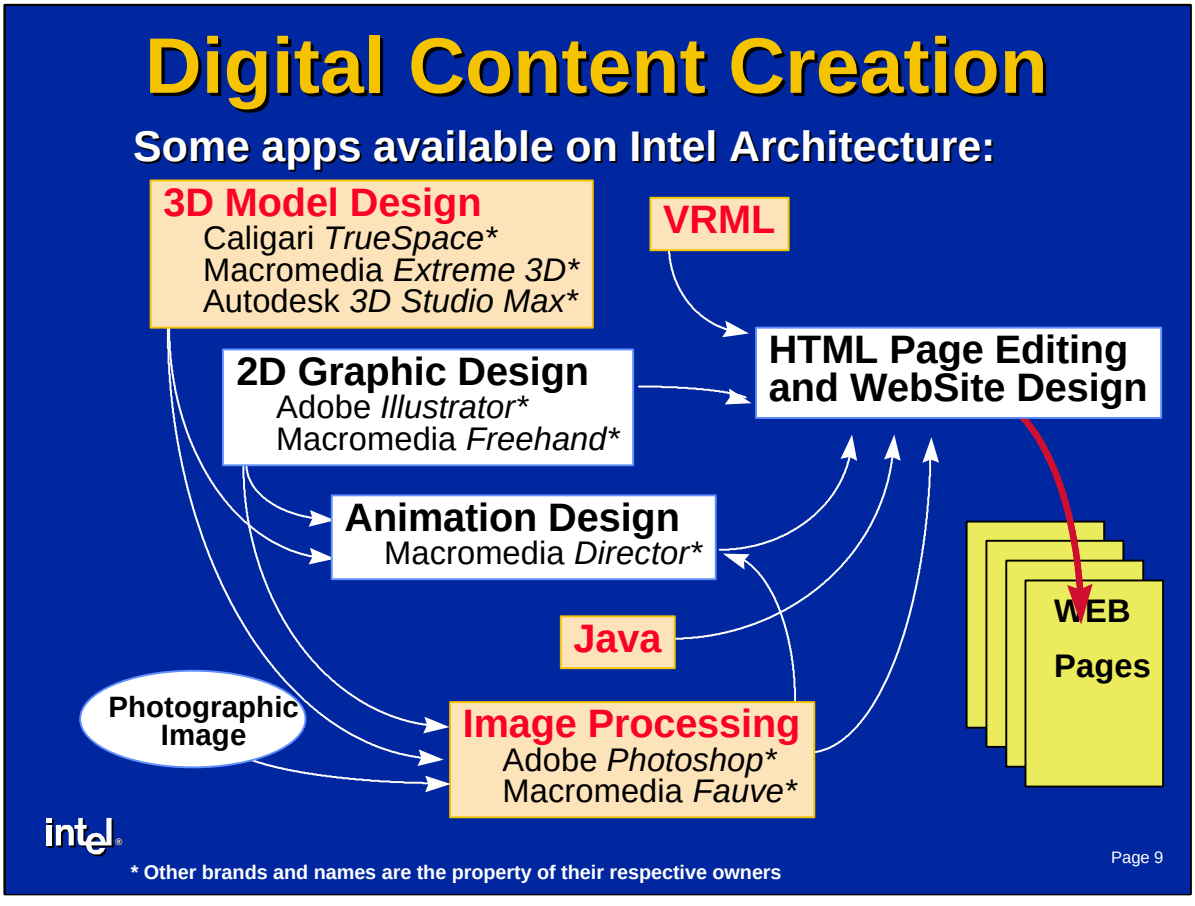

- **Web Authoring, also called Digital Content Creation, is an exploding market segment for workstation applications.**
- **Applications shown in red are most performance hungry, and where the end users will absolutely want to be the most productive**
  - ✓ Companies are competing for presence on the Web. Content is king on the Web and is what fuels repeat visits. The graphics content of web sites increases dramatically.
- **Creating high end graphics, animation, and virtual reality drives the need for high performance authoring tools and systems**
- **Details on Apps**
  - ✓ TrueSpace*, Caligari Corp., $795, 3D graphics and animation software
  - ✓ Extreme 3D*, Macromedia, $695, 3D graphics and animation tool
  - ✓ 3D Studio Max*, Autodesk, $3495, high end animation with many special features
  - ✓ Illustrator*, Adobe, $495, Postscript-based graphics production tool
  - ✓ Freehand*, Macromedia, $595, Design and illustration tool
  - ✓ Director*, Macromedia, $850-1199, creates product demos, educational courseware, animated questionnaires, and on-screen training program
  - ✓ Photoshop*, Adobe, $895, 32-bit color image processing program, Combines painting, drawing, and photo darkroom capabilities
  - ✓ Fauve*, Macromedia, imaging processing software similar to Photoshop
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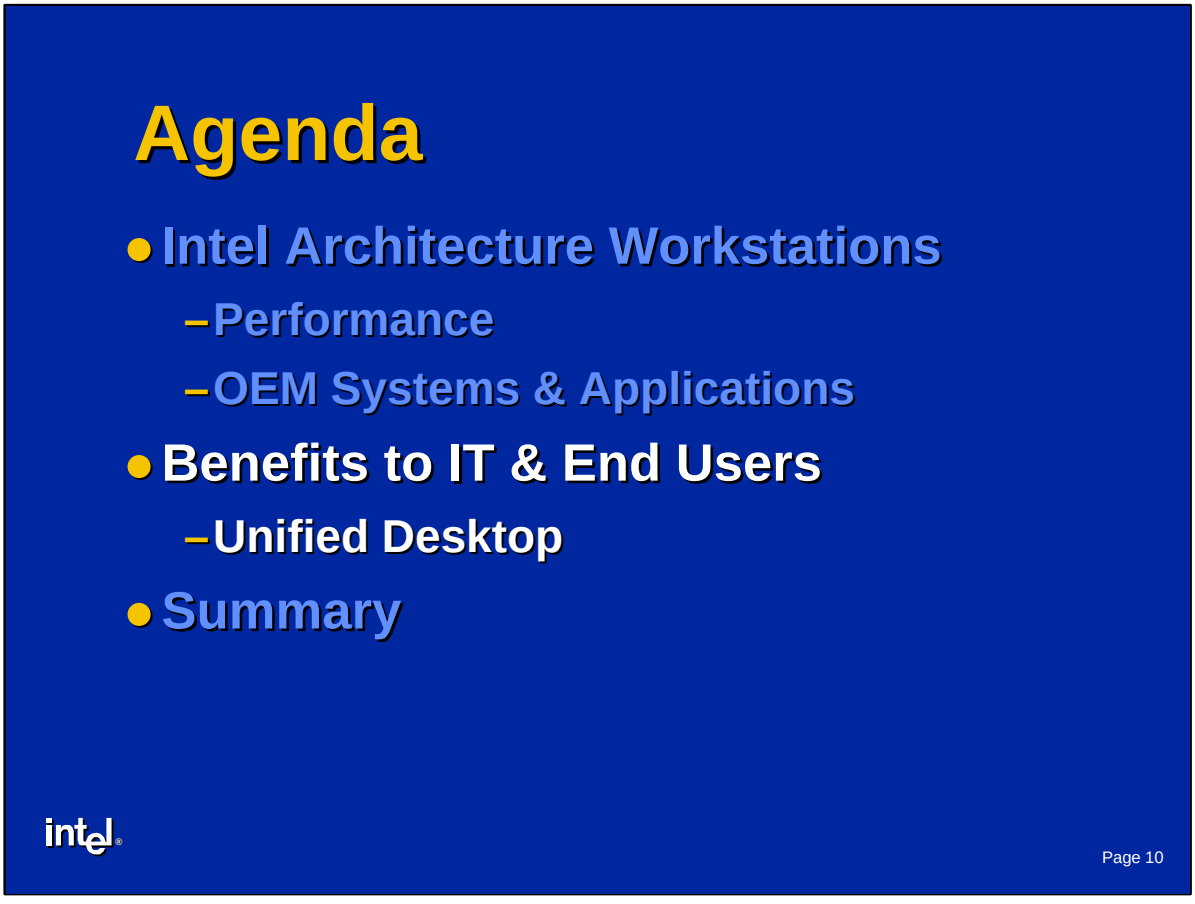

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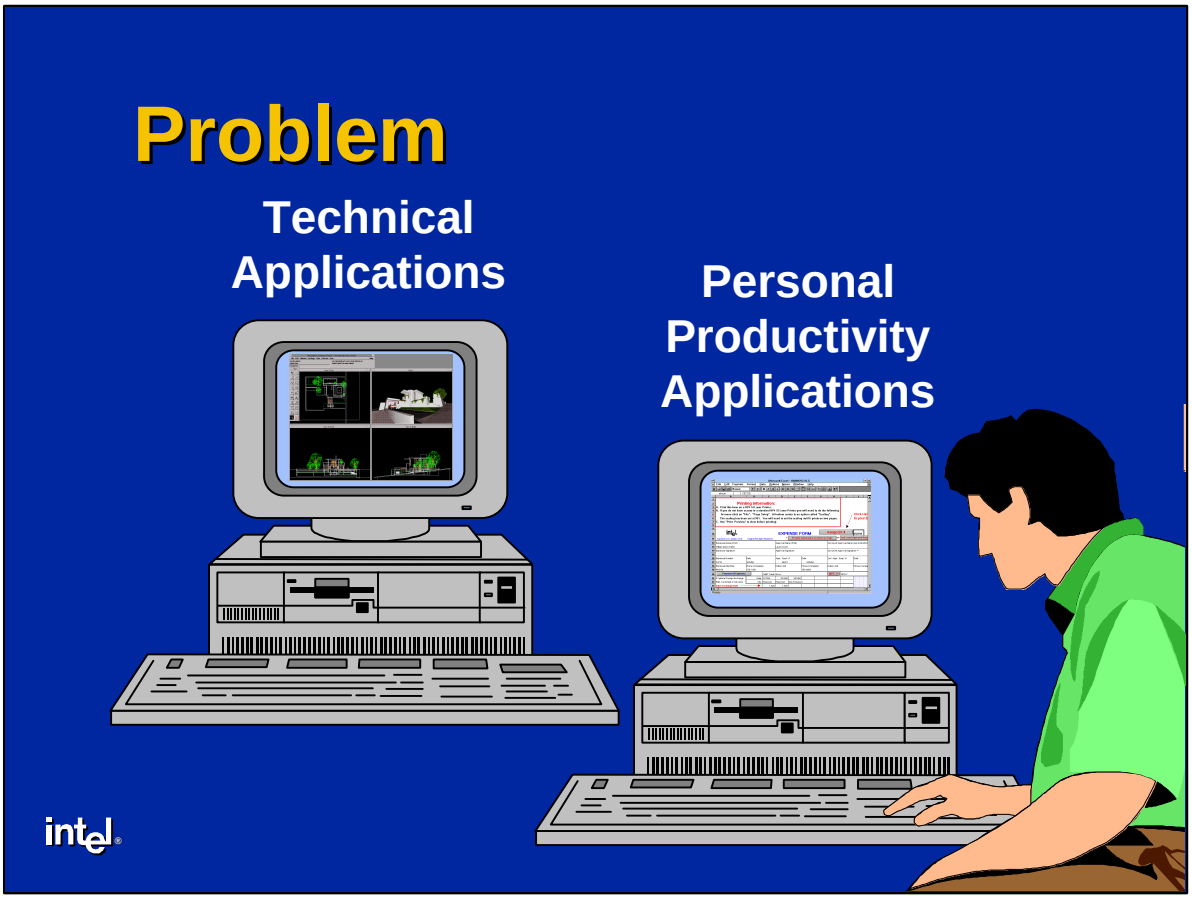
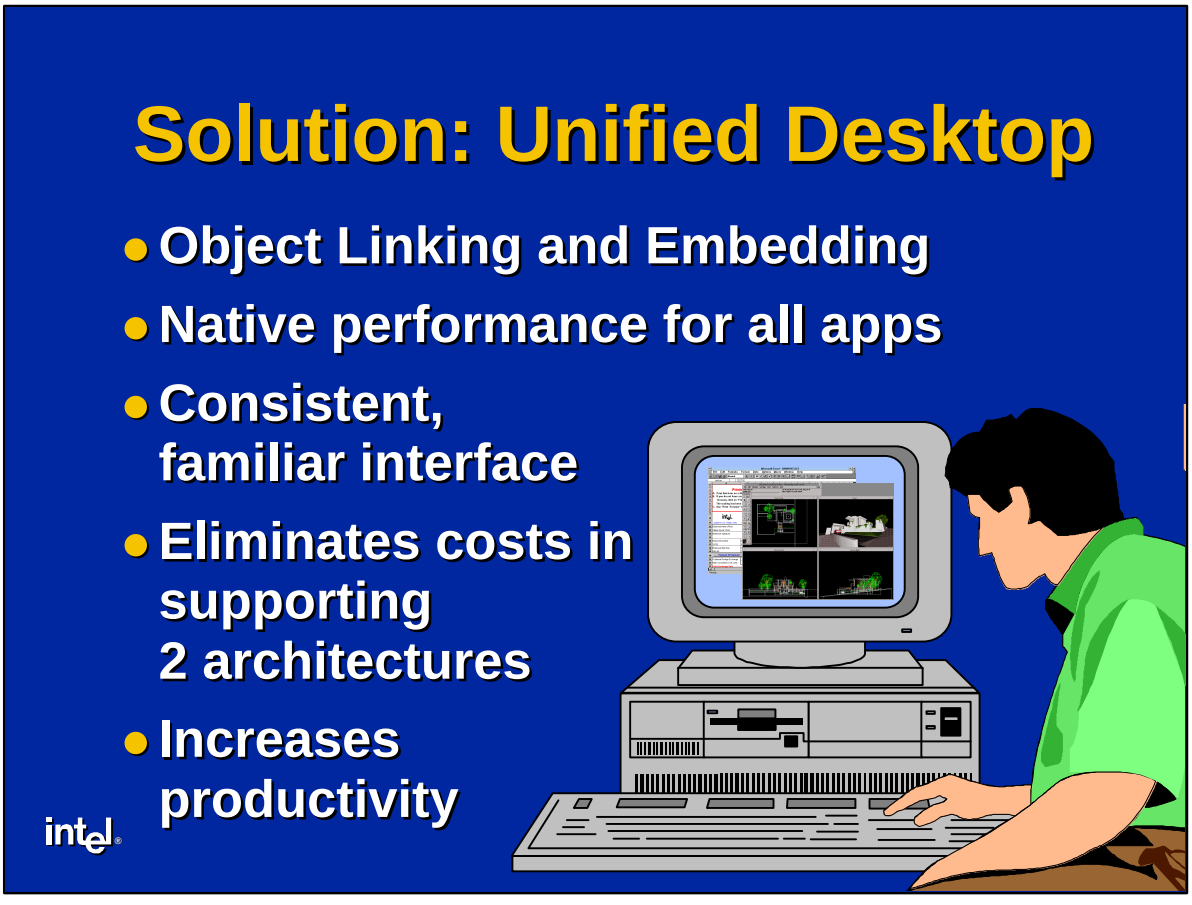


- Here is a common problem for workstation users. They have to deal with 2 machines on their desktop -- a RISC based workstation for running technical apps and an Intel architecture based PC for office productivity apps such as word processing, spreadsheet, and presentation software.
- 73% of respondents to the IDC Emerging Workstation Market End-User Survey (April, 1996) said they have a workstation AND a PC. This is very expensive for the enterprise and counter-productive for the end user!



- You get a unified desktop by adopting an Intel architecture based workstation. Instead of buying, maintaining, and supporting 2 systems (and 2 architectures), the Intel architecture based workstation allows you to deal with a single system.
- By supporting one Intel Architecture based workstation instead of a RISC workstation and a PC , manageability costs are greatly reduced. End users become more productivity because they deal with one machine with one familiar interface.
- More than 55% of the respondents to the IDC Emerging Workstation Market End-User Survey (April, 1996) believe having a single system that runs both the workstation app and PC productivity apps is very desirable.

Summary

- Intel Architecture workstations deliver industrial strength performance
- Hardware and software products are available NOW
- Intel Architecture workstations provide a unified desktop, resulting in lower costs and higher productivity

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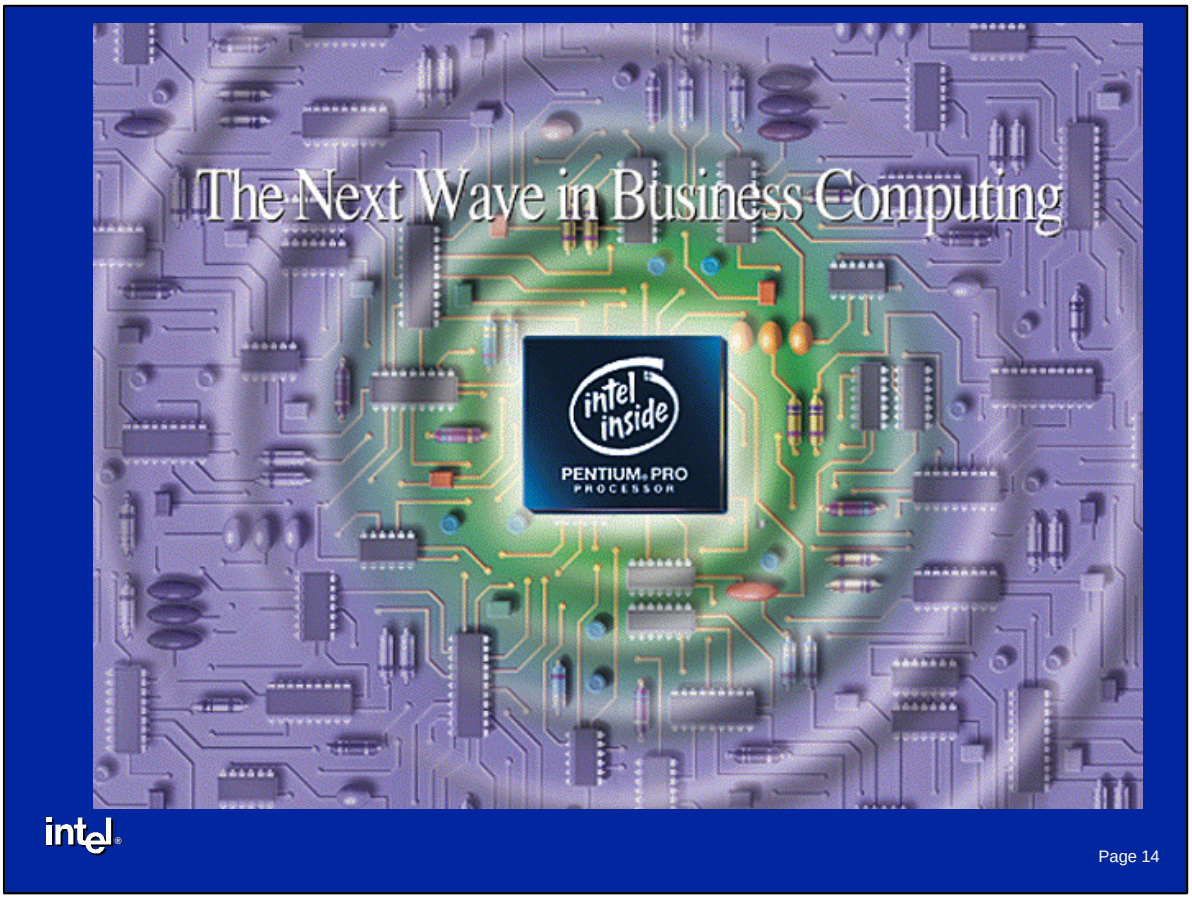
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