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Industry Trends and Their Impact on Today's Operating Systems

SCO Forum

August 8, 2005

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Discussion Agenda

1. A Confluence of Industry Transitions
2. Virtual machine software, 64-bit, and standardization
3. The SCO Group then and now
4. What happens next?
5. Q&A

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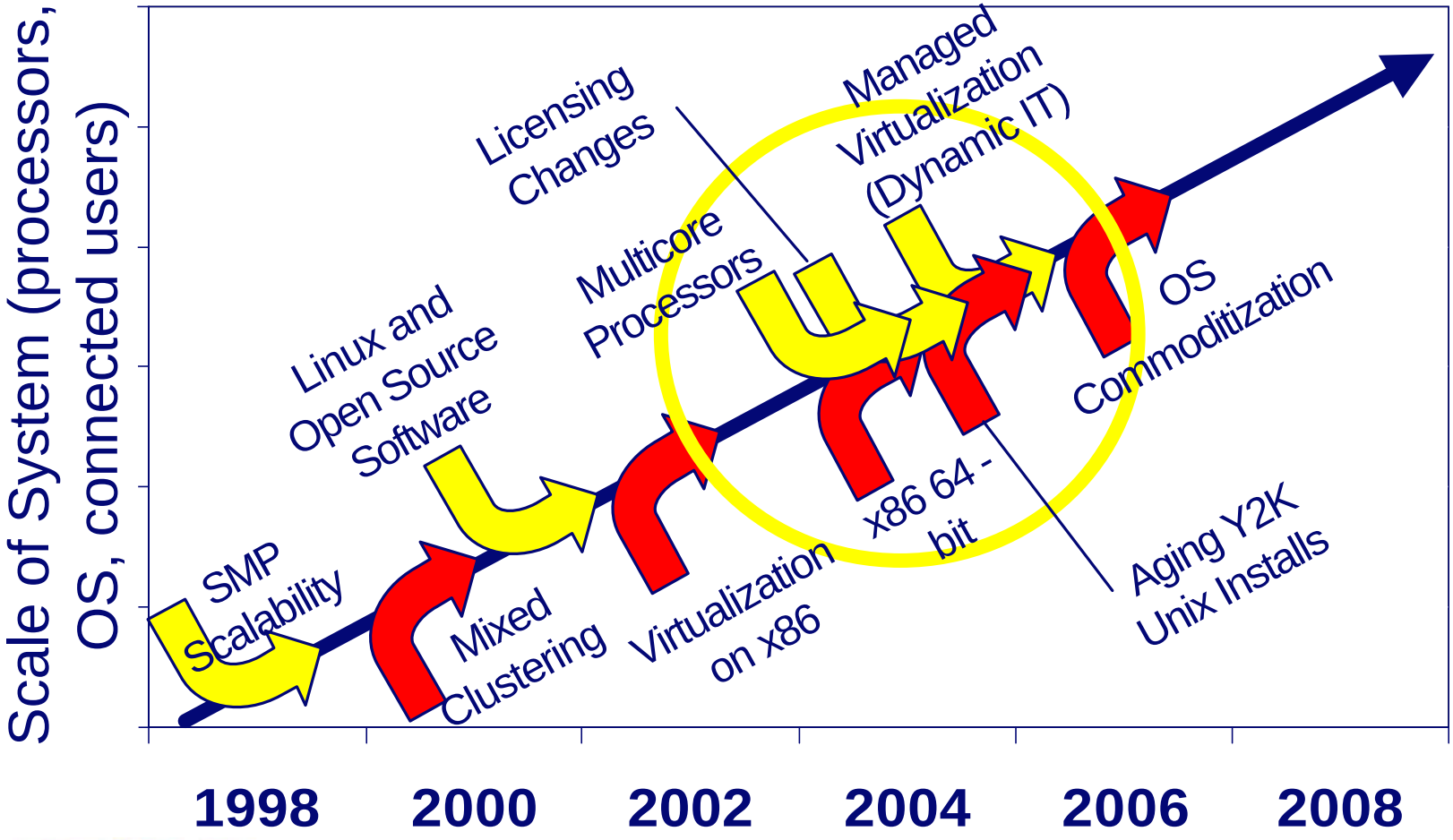
A Confluence of Industry Transitions



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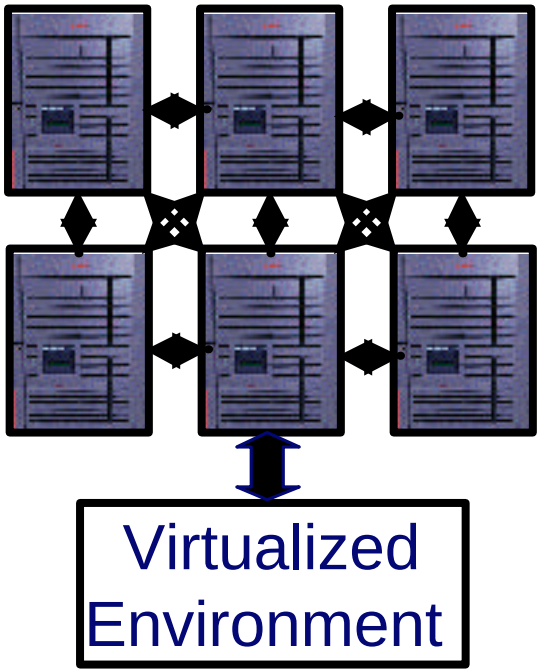
How Does IDC View Virtualization?

- More than just virtual machines!
- Abstracts system functions away from the underlying hardware
- Functions are no longer tied to a single host or device
- Creates the appearance of single computing environment
- Or, creates multiple computing environments on a single platform
- Optimizes use of each host and boosts server utilization
- The tradeoff: increased complexity for a consolidated infrastructure



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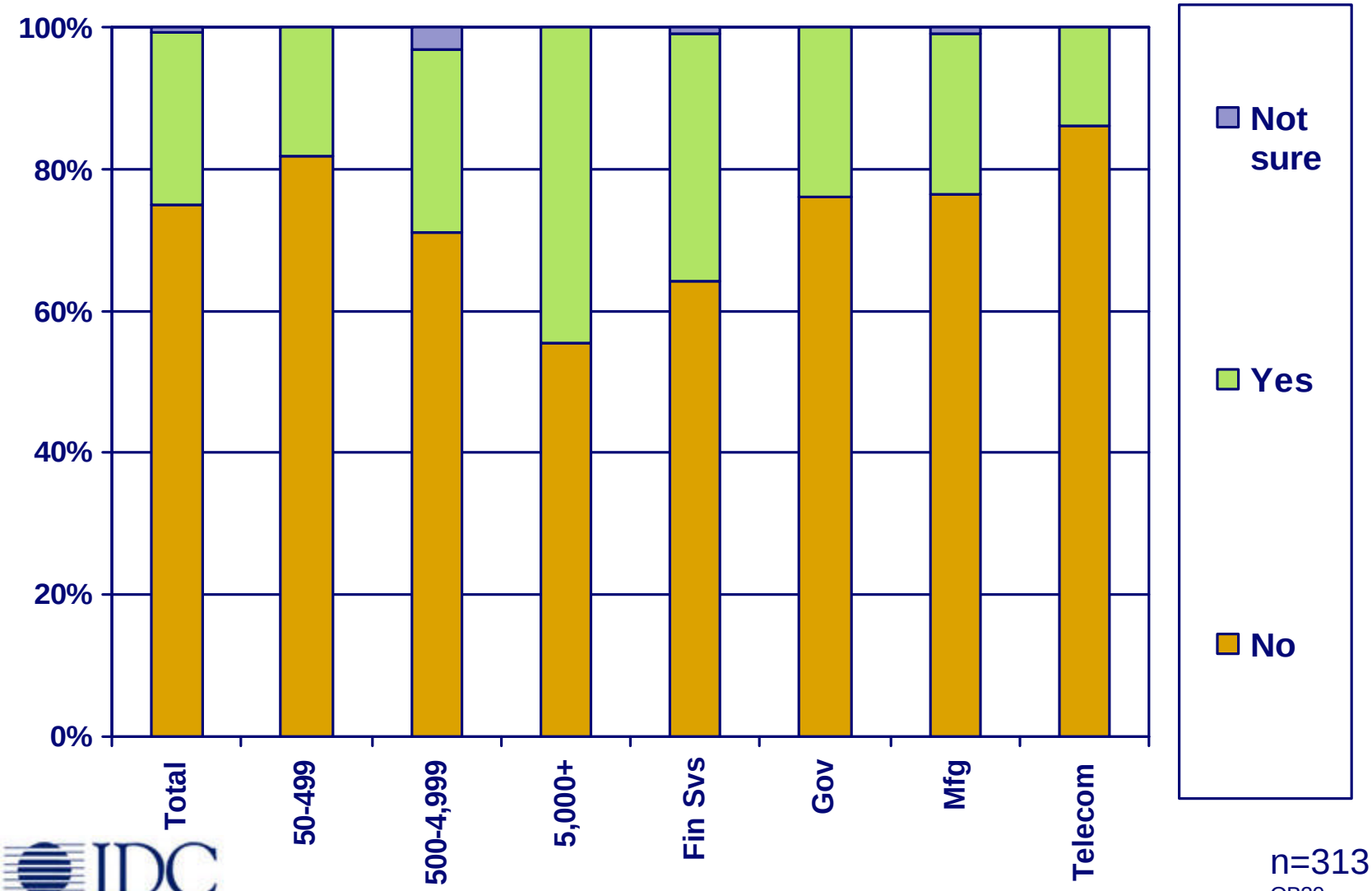
Use of (Server) Virtual Machine Software

Do you use virtual machine software to support multiple server OSes on a single piece of hardware?



n=313
QB20
Base: Random rotation of respondents

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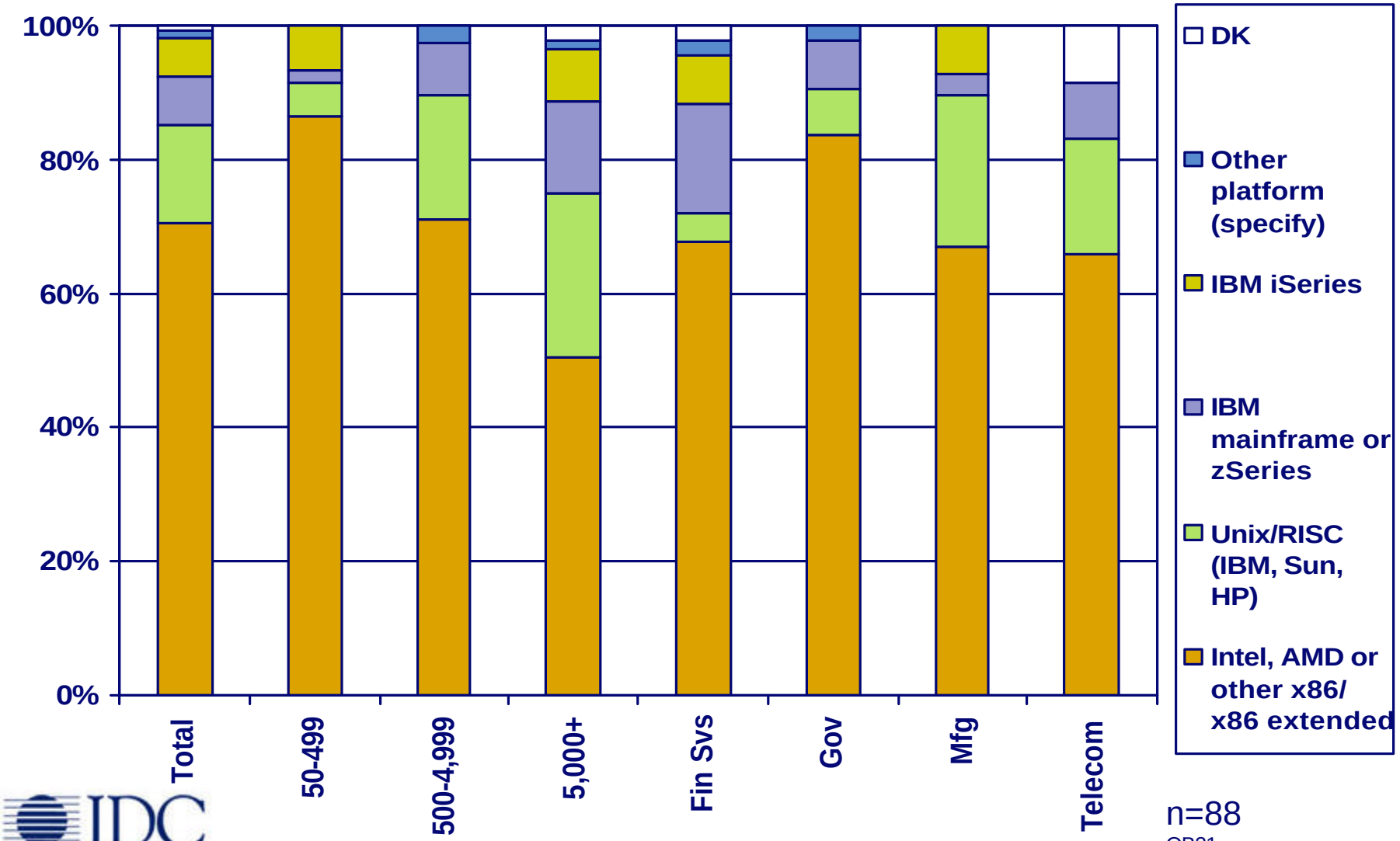
Source: IDC, 2004, Unix to Linux Software Multiclient Study

Platforms Supporting (Server) Virtual Machine Software

What platforms do you use virtual machine software aboard?



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QB21

Base: Respondents using virtual machine software

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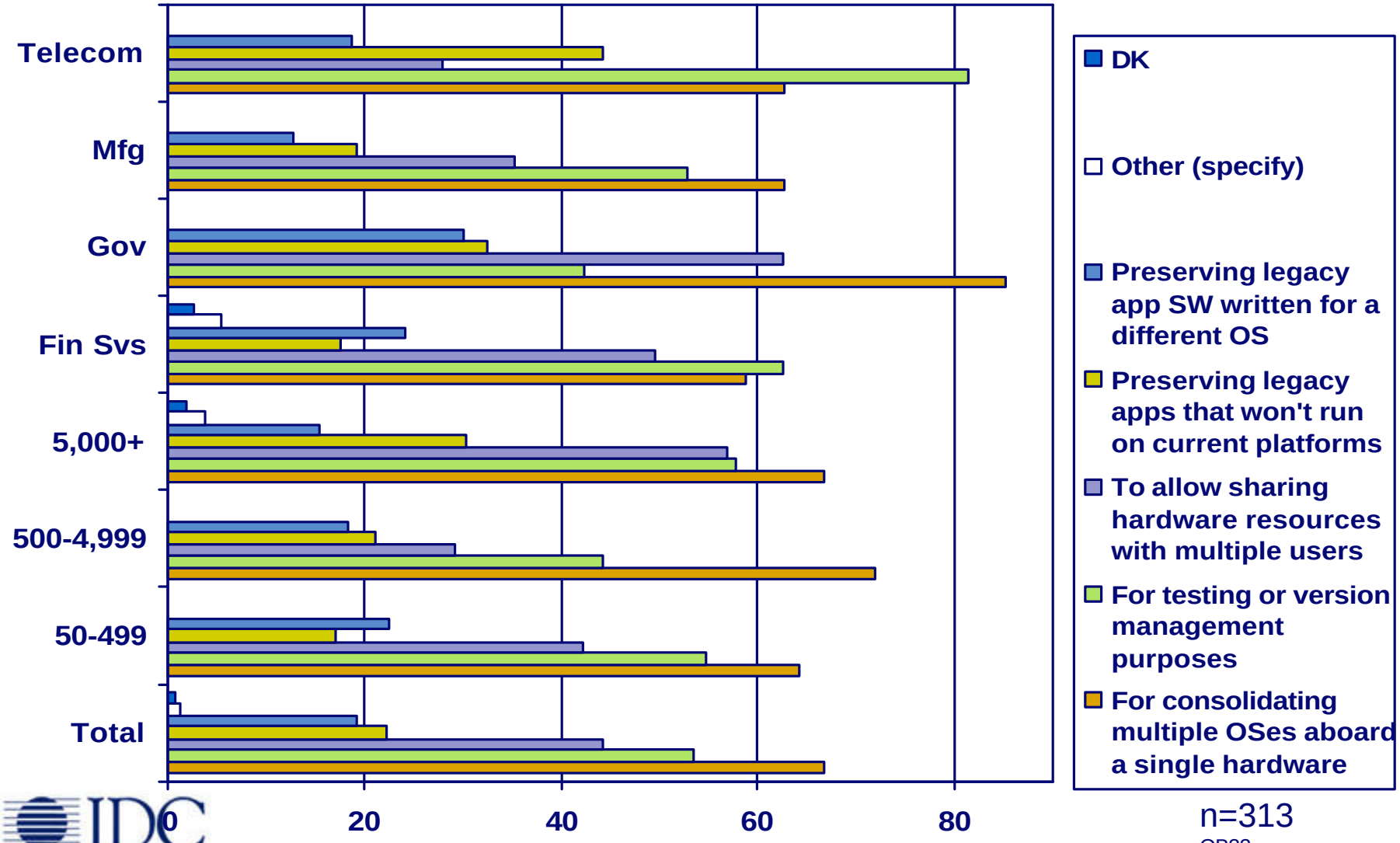
Source: IDC, 2004, Unix to Linux Software Multiclient Study

Why Use Virtual Machine Software

What is the reason for using virtual machine software?



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QB22

Base: Random rotation of respondents

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Source: IDC, 2004, Unix to Linux Software Multiclient Study

Impact of Multicore Processors

- More power in the same footprint
- Benefits for existing operating systems, applications
- Solves scalability needs in smaller form factors, smaller processor “socket” counts
- Contributes to the crossroads affecting licensing
- A driver of industry transitions

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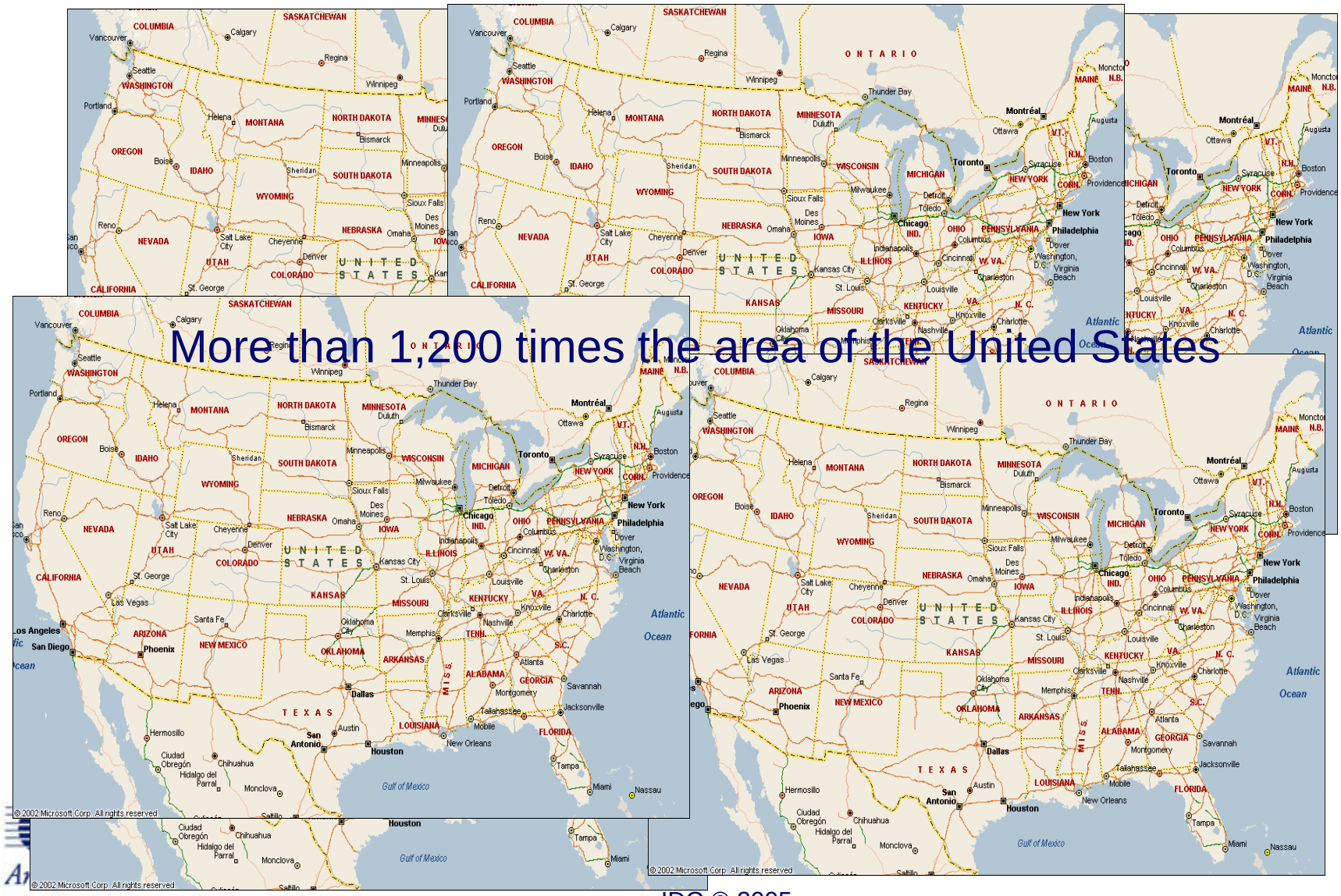
Impact of 64-Bit Processors



Benefits of 64-bit Processors

- If it isn't broken…
- Better performance
- Better scale
- Nondisruptive hardware upgrade
- Nondisruptive OS upgrade
- Nondisruptive application software upgrade

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Licensing Complexities in Datacenter Environments

Virtualization – here today and impacting licensing
- VMware GSX, ESX, Virtual SMP, VirtualCenter, Vmotion
- IBM Hypervisor, HP VSE, Xen, Veritas, Citrix
- New startups offering clustering, grid computing

Dynamic IT deployments – next big licensing challenge
- Provisioning for Dynamic IT
- Lifecycle unpredictable

Current license models losing relevance
- Value prop of perpetual rights
- Need for expandability on as-needed basis
- Static perpetual rights unsuitable for Dynamic IT

Upside may exist for revamped licensing
- Pricing and usage Ts and Cs critical for happy customers
- Potential for upside, but only if priced right

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A Trend toward Standardization

Trying to simplify the datacenter environment

The Goal: Easing management and updating tasks

Approaches to standardization vary, including the following:

- By vendor (eg., HP hardware or MS OS)
- By system (RISC/Unix)
- By HS or SW architecture (x86, Linux)
- By database layer
- By enterprise application layer
- By virtualization technology layer

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What Happens Next: How Change is Influencing the Industry

- Utilization rates will climb
- Customers will favor standardized architectures
- Survivors and winners live atop the standardization layers
  - It's not enough to "ride" on the wave
  - Need to harness the wave for users' benefit
  - Industry standard building blocks becoming key
- Ability to play in a dynamic IT environment *essential*
- Change is in the wind, but Unix does not have to be left behind (especially on x86)
- Long-term "survivors" will be Windows, Linux and Unix
- OS becomes a building block over time – apps are the key to customer deployment

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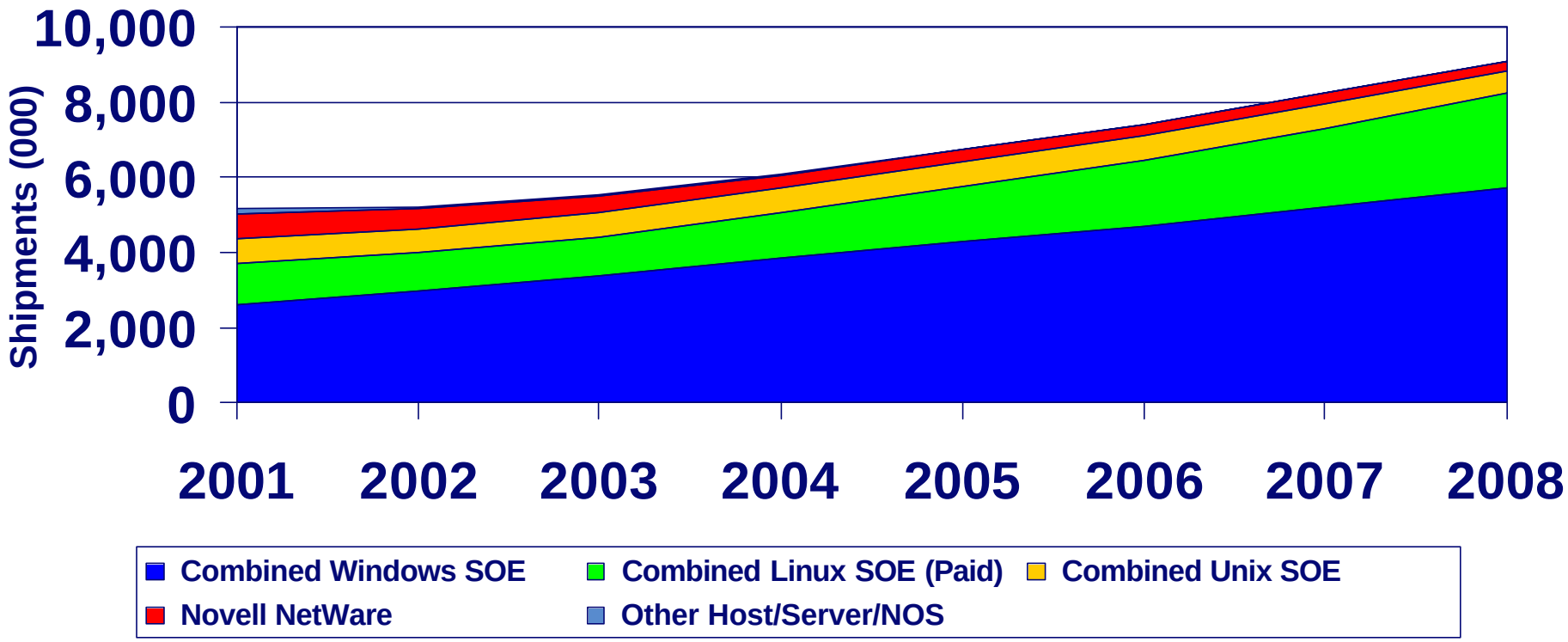
Operating Systems Forecasts

Worldwide server operating environment new license shipments, 2001-2008 (000)



2003-2008 CAGRs

Linux: 19.7%
Windows: 10.8%
Unix: flat

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SCO Group – January 2003 Review

- Business
  - Business suffering from channel competition
  - Direct competition from Microsoft and Linux
  - Name recognition low, little end user pull
- Strategy
  - No clear roadmap for development or product strategies
- Products
  - SCO Unix products have deep history, broad customer installed base
  - Linux compatibility/migration strategy OK
  - Developer programs are weak compared to Microsoft

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SCO Group – Then and Now

Business

- Retain/grow channel partners
  - *Channel partners need compelling reason to join*
  - *Competitive platforms continue to be attractive, offering growth opportunity*
  - *However, the Linux alternative is less compelling for existing ISVs*
- Need to grow beyond your current install base
  - *Continues to be challenge, but new products and strategies will help*
  - *Linux is looking more like traditional OS products*
- Need to capture SMB Linux opportunities before somebody else
  - *Linux growth in SMB is lagging expectations*
- Must counter the influence of Red Hat on channel partners
  - *Red Hat has refocused, but Microsoft continues to be threat*
  - *Opportunity to co-opt Sun, Mac OS solutions and partners*
  - *Opportunity for ISVs and especially resellers to broaden their portfolio*
- Must develop "market pull" for solutions based on SCO products
  - *Industry resurgence for Unix on x86 – Sun Solaris 10 for x86, Mac OS X on its way, etc. may help rebuild market pull*
- Need to boost name recognition
  - *Done*

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SCO Group – Then and Now

Strategy

- Develop road map for ISV partners
  - *Done*
- Must help partners develop compelling new solutions based on SCO Unix
  - *OpenServer 6 "Legend" release helps make this possible*
- Value and importance of OS is being abstracted away by virtualization technologies.
  - *New news today provides roadmap to address this*
  - *OS layer remains critical, but how it is used may change*

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SCO Group – Then and Now

Products

- Application portability to/from Linux is important… remains a huge benefit to current developers and ISVs, but of less interest to other developers
  - *OpenServer 6 resolves most of these issues and now is up to par with other non-Microsoft software stacks*
  - *Solutions need to be based on standard technologies*
- No in-house software stack for developers. Where is the application server, JVM and other industry standard virtualization technologies?
  - *Java, MySQL, PostgreSQL, Apache, Mozilla, Tomcat Java servlet container, Samba file and print services – Done!*

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Essential Guidance

- Utilization rates of servers will climb
- Customers will favor standardized architectures
- Survivors/winners live atop the standardization layers
  - It's not enough to "ride" on the wave
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  - Industry standard building blocks becoming key
- Ability to play in a dynamic IT environment *essential*
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Questions?

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