

INPUT
Annual Presentation for
University of California

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Downsizing Information Systems Program
(UIISP)

Annual Presentation for University of California

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Presentation Outline
University of California
INPUT, September 10, 1992

- Downsizing
 - Current User Views
 - Vendor Positions
 - INPUT Conclusions
- Open Systems Update
 - Classes of Downsizing
 - User Plans and Timing
 - Benefits
 - Issues
- Image Processing
 - Driving and Inhibiting Forces
 - Major Trends
 - Futures







Downsizing

Revolution and Opportunities

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ID- 4

Notes



Downsizing

Types of Downsizing

- Platform driven
- Application driven
- Organization driven

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Downsizing

Platform Driven Description

- Replacement of the core processing capability (platform) on a price/performance basis.

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Downsizing

Platform Driven Technologies Supporting

- SQL servers
- RISC
- Cooperative processing
- LANs—client/servers
- Open systems

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Downsizing

Platform Driven Driving Forces

- Price/performance
- Costs
- Purchased applications
- Ease of use of technology
- Reaction time

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Downsizing

Application Driven Description

- Transfer of the application, either user interface or all, to a workstation or LAN environment.

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Downsizing

Application Driven Technologies Supporting

- SQL
- Client/server
- Distributed data base management systems
- LANs—client/servers

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Downsizing

Application Driven Driving Forces

- User involvement in application development
- Re-engineering of business processes
- Many information technologies
- Proving IS can be cost effective

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Downsizing

Application Driven—Example

- Executive Information System
 - LAN-based server
 - SQL data base
 - PC interface—user can customize
 - Structured interfaces to operational data bases

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Downsizing

Organization Driven Description

- The role of information systems becomes focused on advising and consulting, not performing.

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Downsizing

Organization Driven Driving Forces

- Re-engineering of the total organization
- User involvement in IS process
- IS performance problems
- Client/server and RISC technology

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Downsizing

Downsizing Plans

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Downsizing

Survey

- Information systems executives
- Information services vendors
- Same questions
 - What are the underlying issues?
 - What will be the rate of progress?
- Goal - Is there conflict or confusion?

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Downsizing

Platform Attributes

Question: Rank the platforms
for each of the attributes.

Mainframe

Minicomputer

RISC

Personal computer

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Downsizing

Platform Attributes

- Agreement on mainframe & PC
- Confusion on minicomputer and RISC
 - Vendors favor RISC
 - Users favor minicomputers

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Downsizing

Application and Data Base Plans

Question: Where is each
application or data base planned
to reside in 1991 and 1995?

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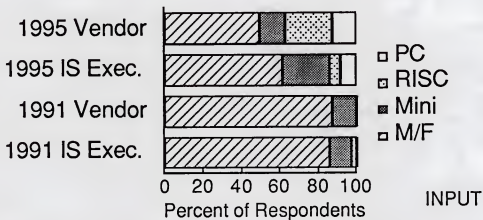
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Downsizing

Data Bases Plans— Finance/Accounting



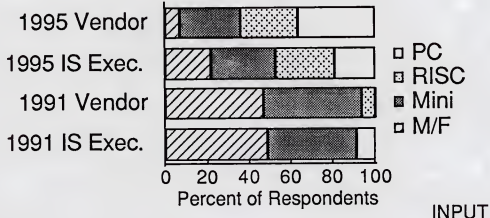
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Application Plans— Production



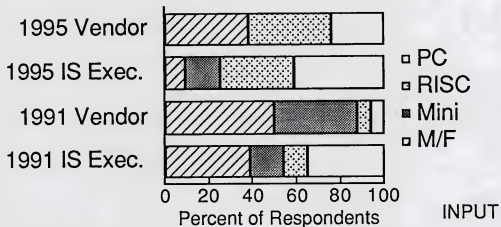
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Downsizing

Application Plans— Image Processing



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Plans

Question: When will the statement apply to IS infrastructure?

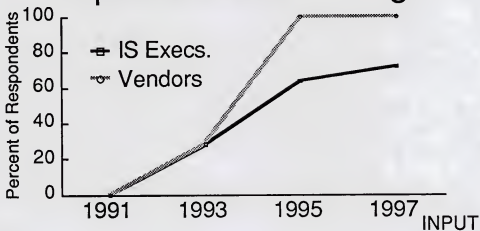
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Downsizing Major Client/Server Applications Implementation Timing



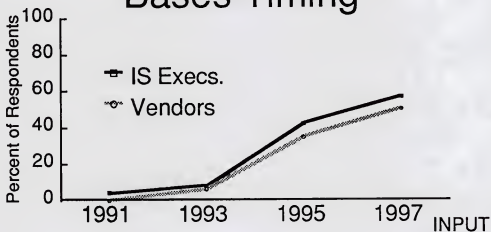
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Significant Distributed Data Bases Timing



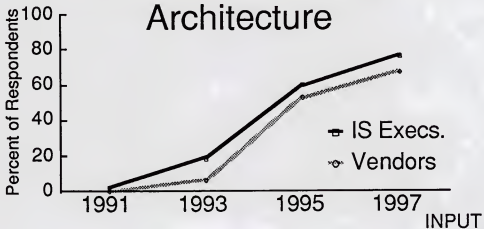
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Downsizing

Timing of Cooperative Processing As Primary IS Architecture



ID- 42

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Downsizing

Issues

- Information Systems
 - Shifting underlying technology
 - Re-engineering without losing data integrity
 - Managing the transition
 - Buying from new vendors

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Downsizing

Conclusions

- Confusion—but many plans
- IS execs. and vendors do not agree
- Vendor investment will drive direction
- *Technology* = revolution
- *Implementation* = evolution

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Downsizing

Conclusions

- Information systems
 - Basis for re-engineering/re-investment
 - Does not negate role of IS
 - Opportunity to provide real ROI
 - Opportunity to market increased IT benefits

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Conclusions

- Vendors more optimistic than buyers
- Some applications will lead
- Data bases move more slowly than applications

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What Is An “Open System”?

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Notes



Open Systems Are Not

- Technology based
 - MVS
 - UNIX
 - Code generators
- Access to applications software

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Open Systems Are

- Supported by standards
- Supported by de facto standards
 - MS/DOS or Windows
 - 386 processor
- Function oriented
 - Portable, interoperable
- Vendor independent

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Portability—Definition

Data bases and applications can be moved from one operating environment to another with little or no modification.

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Interoperability—Definition

Related to portability - applications and data that can be moved from one environment to another can also interact with each other

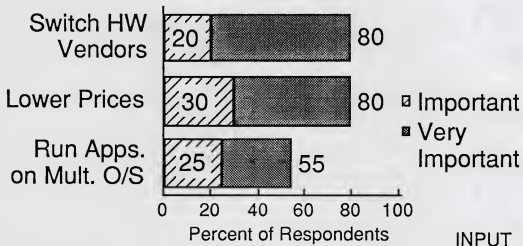
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Benefits of Interoperability



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Notes



Barriers to Open Systems Acceptance

IO-16

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Notes



Significant Barriers

Barrier	Ranking
Conflicting standards	4.2
Lack of standards	3.7
Non-standard implementations	3.6
Lack of in-house skills	3.5

1=Low, 5=High

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Less Significant Barriers

Barrier	Ranking
Lack of package applications	3.3
UNIX applications suitability	3.2
Lack of development tools	2.8
Lack of consultants	2.7
Lack of systems software	2.7

1=Low, 5=High

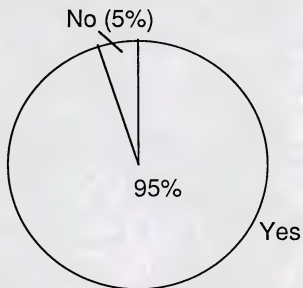
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Benefits Outweigh Problems?



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Expected Open Systems Benefits

- Longer lived applications
- Fewer technology-caused modifications
- Reduced training—user and developer
- Reduced technology risks due to portability

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Conclusions

- “Open Systems” ≠ UNIX
- UNIX and OS/2 are undermined by sponsor conflicts
- Intel chips/MS-DOS = happy medium

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Conclusions

- UNIX value has been hardware based
- CASE and DBMS technology can lock in user
- Optimized environment not really open

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Conclusions

- Balance between open and value-added
- Users may not want true open systems
- Some vendors will go out of business
- Alliances will be a large factor

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Open Systems

- Removes shield of proprietary technology
- Strengthens networking capabilities
- Removes price protection
- Changes the competitive rules

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Notes



Image Processing

IP-1

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Notes



Electronic Imaging Driving Forces

- Business competition
- Decreasing system costs
- Increasing document management costs
- Productivity/quality
- Regulatory compliance

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Notes



Electronic Imaging Inhibiting Factors

- System cost
- Lack of image awareness
- Lack of standards
- Work flow redesign
- Product improvements needed

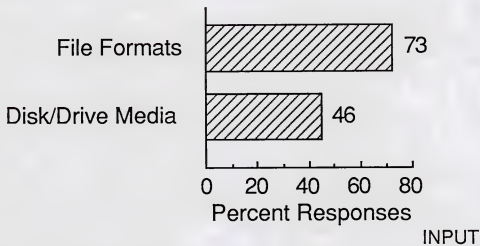
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Image Standards Needed

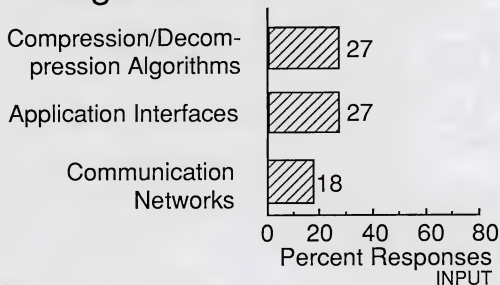


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Image Standards Needed



IP-18

Notes



Trends in Image Processing

- Initial acceptance of enterprise-wide systems
- Integrated data/text/image/voice document storage and retrieval systems
- Increasing use of fax technology

IP-6

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Notes



Trends in Image Processing

- Integrated text and graphics scanning
- Standard platforms
- Applications-driven
- 'Image' as part of a total IS solution

IP-7

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Notes



Evaluation Criteria

- System cost
- Technology availability
- Standards
- Communications costs
- Connectivity
- Business competition

IP-10

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Image Justification Factor

Reason	Rank
Improved customer service	1
Improved records management	2
Personnel savings	3
Media storage savings	4
Space savings	5

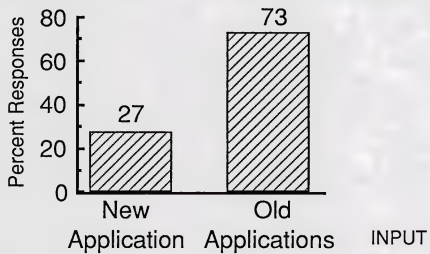
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Image Processing New Applications vs. Augmenting Old



IP-12

Notes



Implementation Approach by Industry—New vs. Old

Industry	Percent	
	New	Augment Old
Banking/finance	42	58
Insurance	27	73
Medical	15	85
Transportation	11	89
State/local govt.	10	90

IP-13

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Notes

the Ca^{2+} concentration in the cytosol of the cell.

The Ca^{2+} concentration in the cytosol of the cell is regulated by the Ca^{2+} channels in the cell membrane. The Ca^{2+} channels are classified into voltage-gated Ca^{2+} channels (VGCCs) and ligand-gated Ca^{2+} channels (LGCCs). VGCCs are activated by changes in the membrane potential, while LGCCs are activated by the binding of a ligand to the channel protein.

The Ca^{2+} concentration in the cytosol of the cell is also regulated by the Ca^{2+} pumps in the cell membrane. The Ca^{2+} pumps are ATP-dependent transporters that move Ca^{2+} ions out of the cell or into the endoplasmic reticulum.

The Ca^{2+} concentration in the cytosol of the cell is also regulated by the Ca^{2+} sequestration in the endoplasmic reticulum. The endoplasmic reticulum contains Ca^{2+} stores that can be released into the cytosol in response to a signal.

The Ca^{2+} concentration in the cytosol of the cell is also regulated by the Ca^{2+} buffering capacity of the cytosol. The cytosol contains various Ca^{2+} buffers that can bind to Ca^{2+} ions and reduce their free concentration.

The Ca^{2+} concentration in the cytosol of the cell is also regulated by the Ca^{2+} signaling pathways. The Ca^{2+} signaling pathways involve the activation of various proteins and enzymes that regulate the Ca^{2+} concentration in the cytosol.

The Ca^{2+} concentration in the cytosol of the cell is also regulated by the Ca^{2+} homeostasis mechanisms. The Ca^{2+} homeostasis mechanisms maintain the Ca^{2+} concentration in the cytosol of the cell at a constant level.

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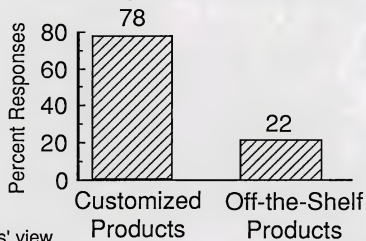
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Product Customization Requirements



Vendors' view

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Conclusions

- Imaging not new
- System costs high
- Permanent storage solution
- Customer service motivation
- Standards necessary
- Applications not new
- Legal issue not solved

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