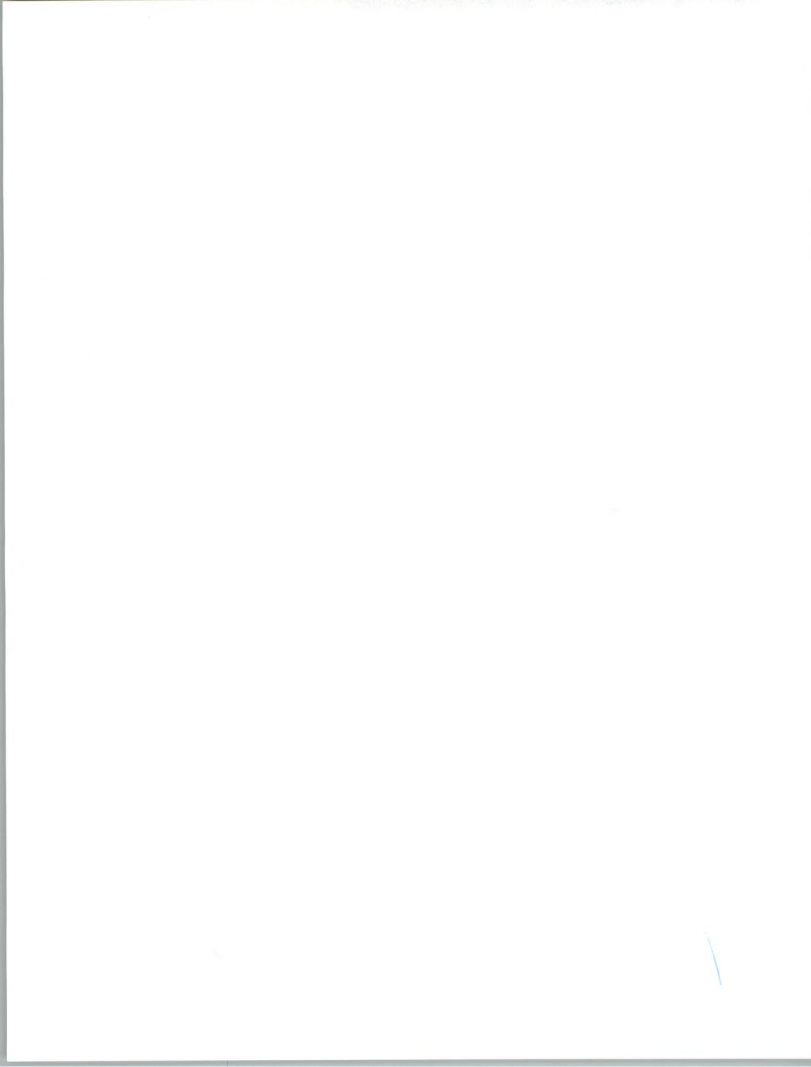


# **Client/Server: The New IT Environment**

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**Peter Cunningham**  
President  
INPUT







# Topics

- Introduction
  - IT Revolutions
  - Client/Server Computing
- Client/Server User Implementation
- Vendor Strategies
- Conclusion

MC3-PAC-2

INPUT

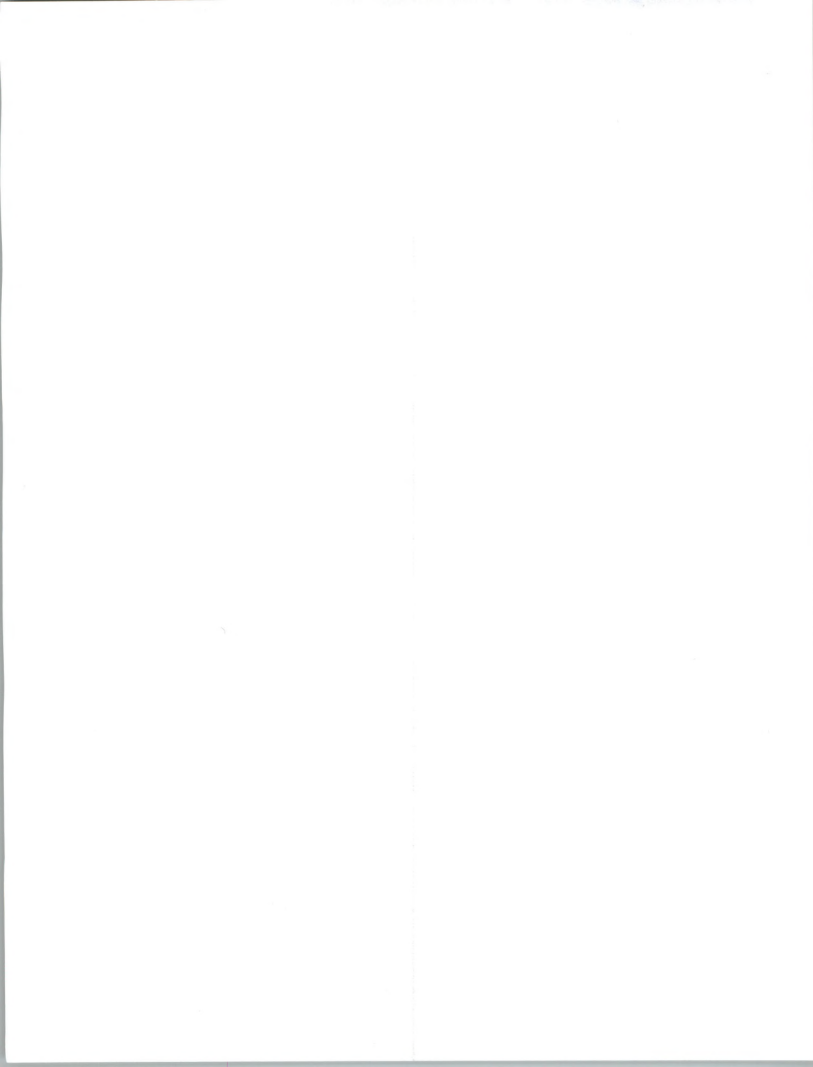
Notes



# Introduction

INPUT

Notes





# Revolutions

- Downsizing
- Outsourcing
- Re-engineering
- Networking

IS-94a

INPUT

Notes



## IS Environment

"Old" Traditional	"New" Downsized
Mainframe	Client/server
Shared	Dedicated
Remote	Local
IS operated	User operated

ID-96

INPUT

Notes



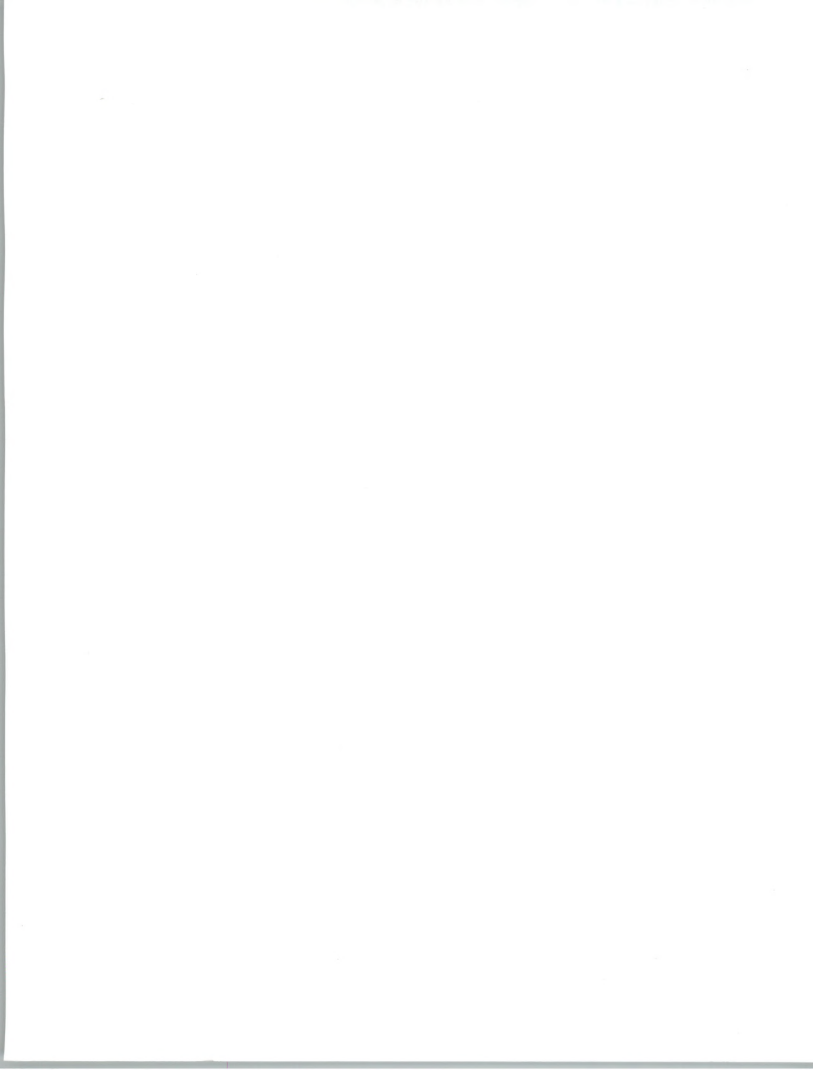
## Client/Server Computing Description

- Concept involves
  - Sharing of responsibility; client and server necessary for applications result
  - 'Action' on the part of both client and server computers to achieve result

MC3-PAC-4

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Notes



# Client/Server User Implementation

MC3-PAC-5

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Notes





## C/S Sample Characteristics

Characteristic	1993	1997
Avg. No. of Clients	1,294	2,318
Avg. No. of Servers	24	96
Avg. No. of LANs	34	78
Server/LAN Ratio	0.71	1.23
Client/Server Ratio	70/1	55/1

124 respondents

INPUT

MC3-PAC-6

Notes



## Equipment Selection Reasons

Reason	Proportion of Mentions (%)	
	Client	Server
In-Place	33	31
Price- Performance	25	22
Standards	18	11
Other	23	35

MC3-PAC-7

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### Notes

\*Top four from 60 user surveys



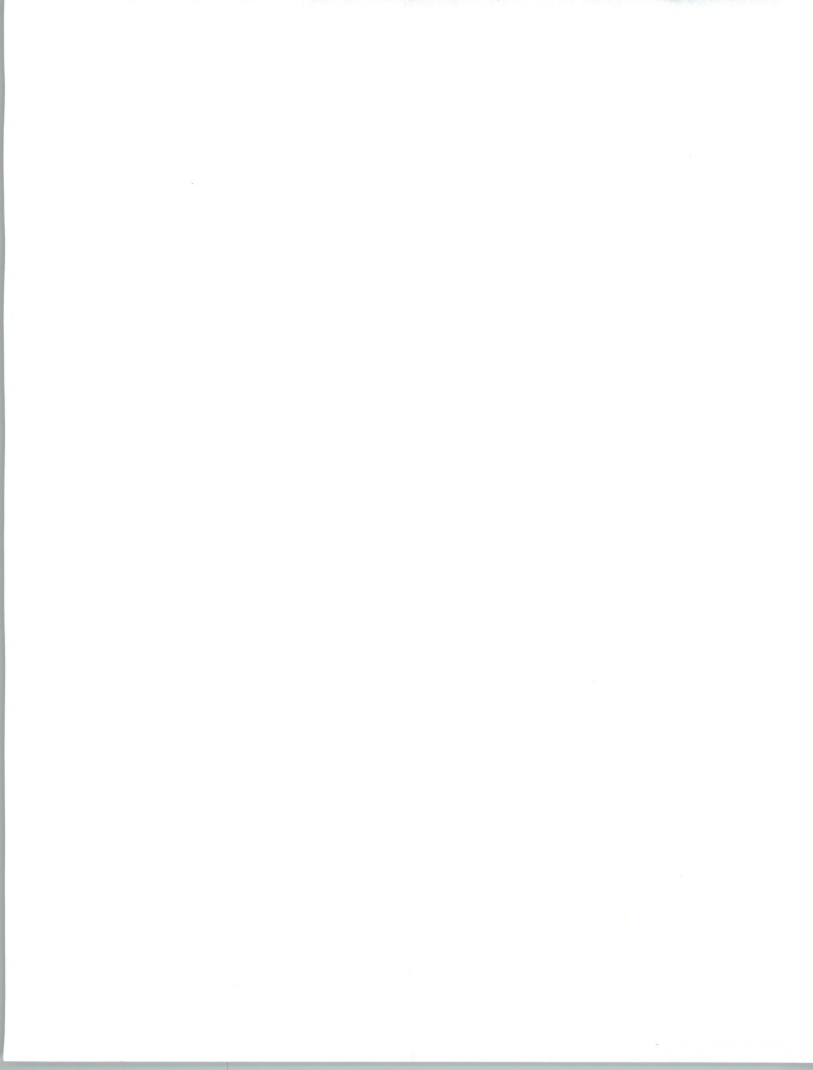
## Distribution of Equipment Vendors

Vendor	Proportion of Mentions (%)	
	Client	Server
IBM	20	30
"Intel"	32	11
Compaq	19	14
Other	28	47

MC3-PAC-8

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Notes



## Conclusions—Equipment

- Servers are increasingly large PCs
- Already 'Legacy' C/S structures
- "Intel" is a leading C/S vendor
- Client market saturating
- Server market is open

MC3-PAC-9

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Notes





## Distribution of Operating Systems

OS	Proportion of Mentions (%)	
	Client	Server
DOS	73	38
UNIX	7	32
OS2	14	13
Other	7	17

MC3-PAC-10

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Notes



## Distribution of Network Operating Systems

OS	Proportion of Responses (%)
Netware	74
LAN Manager	8
LAN Server	7
TCP	6
Other	10

MC3-PAC-11

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Notes



## Operating Systems Selection Reasons

Reason	Proportion of Mentions (%)		
	COS	SOS	NOS
In-Place	27	12	25
Capabilities	11	21	14
Standards	18	5	16

MC3-PAC-12a

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Notes



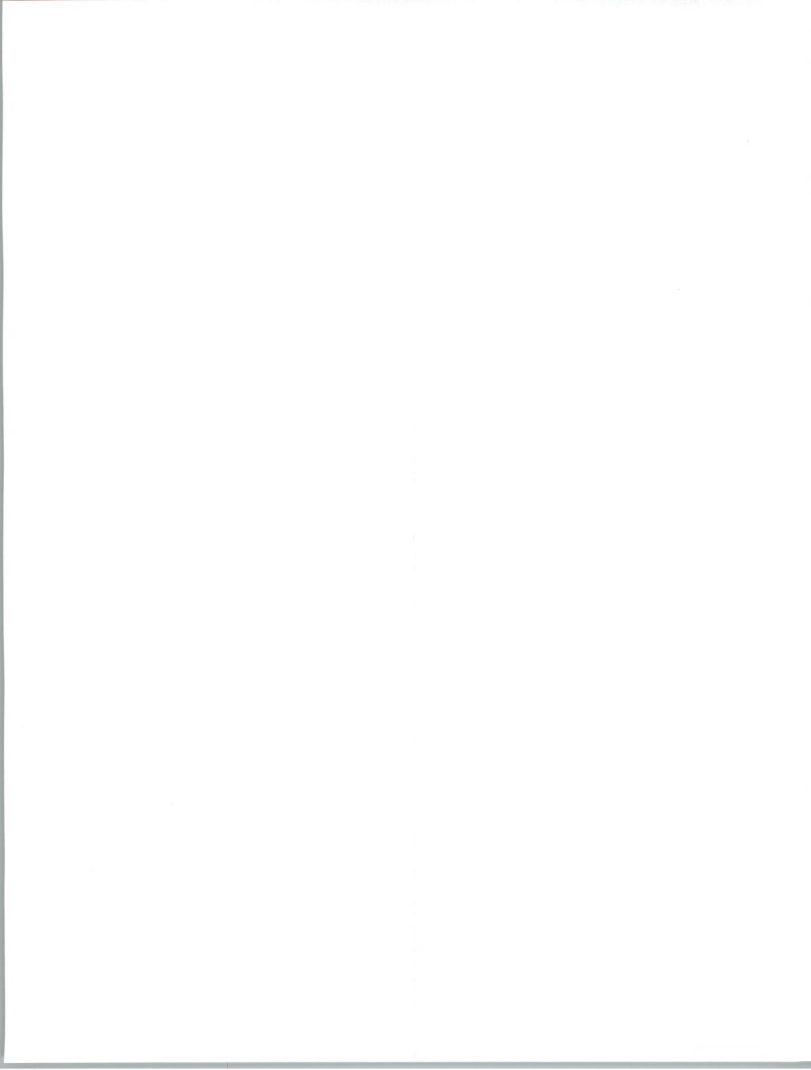
## Operating Systems Selection Reasons

Reason	Proportion of Mentions (%)		
	COS	SOS	NOS
Compatibility	6	14	17
Other	38	48	28

MC3-PAC-12b

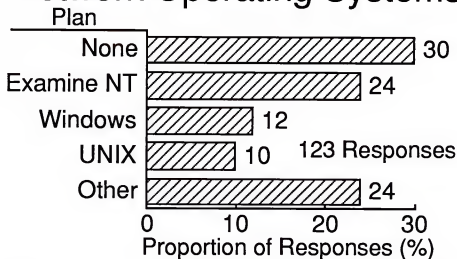
INPUT

Notes





## Future Plans—C/S and Network Operating Systems



MC3-PAC-13

Notes



## Conclusions Operating Systems

- Dislocation between client and server OS
  - Clients, DOS is 'there'
  - Servers, selection is open
- Novell dominates NOS—No change expected
- NT is not penetrating rapidly

INPUT

MC3-PAC-14

Notes



## Distribution of DBMS Vendors

DBMS	Proportion of Mentions (%)	
	Client	Server
Oracle	17	26
Sybase	7	18
FoxPro	14	8

MC3-PAC-15a

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Notes



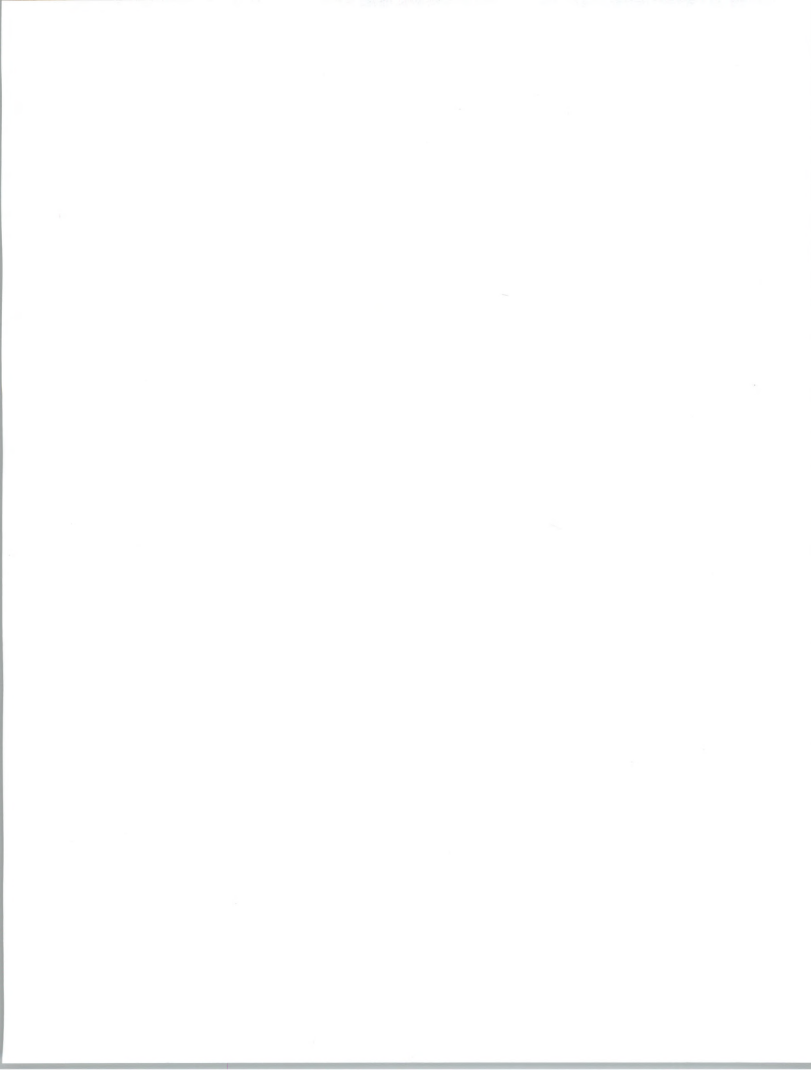
## Distribution of DBMS Vendors

DBMS	Proportion of Mentions (%)	
	Client	Server
DB2	5	9
Access	15	-
Other	43	38

MC3-PAC-15b

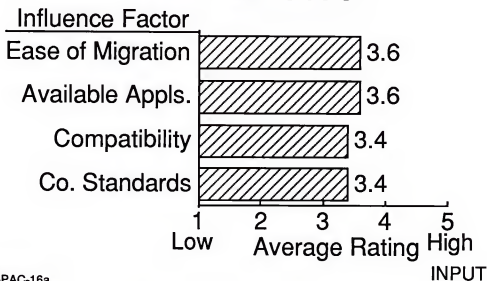
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Notes





## Rating of Factors Influencing DBMS Selection

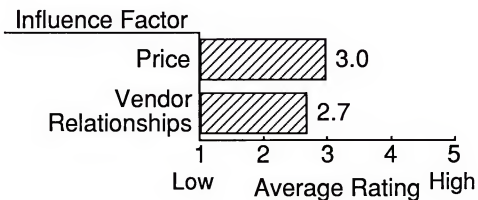


MC3-PAC-16a

Notes



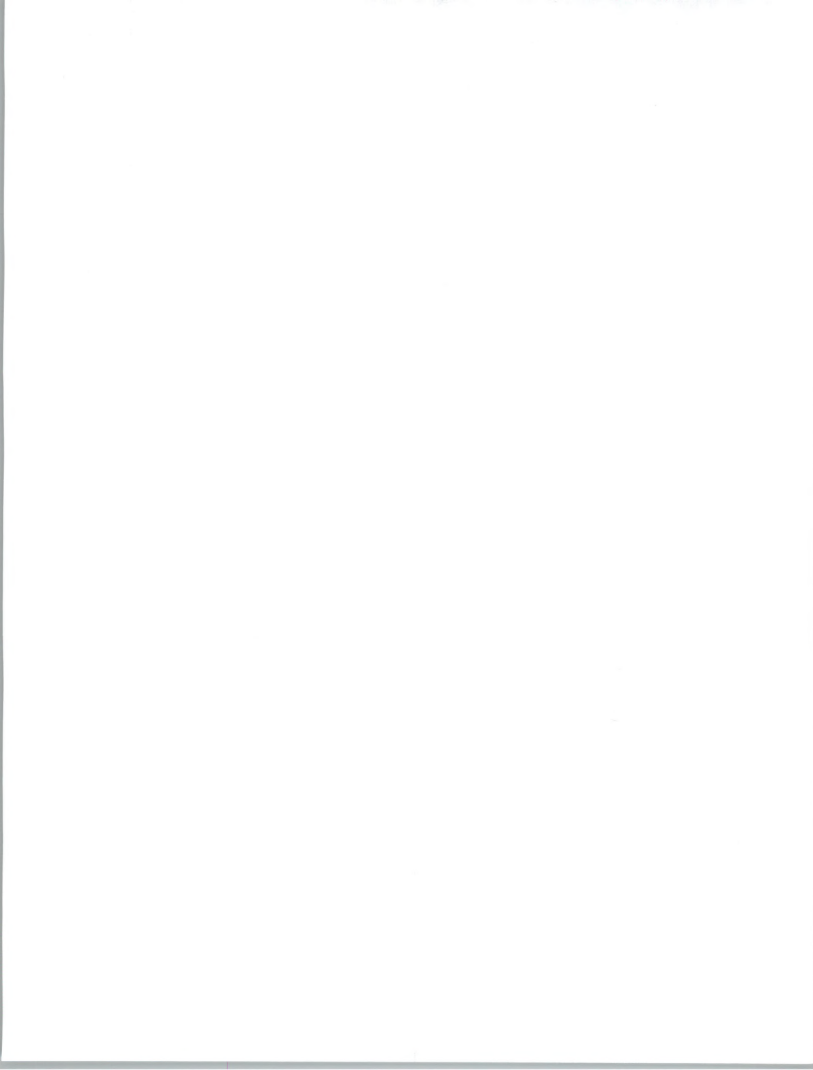
## Rating of Factors Influencing DBMS Selection



MC3-PAC-16b

INPUT

Notes



## Conclusions on DBMS

- Oracle is well positioned on both C and S
- Microsoft gaining ground fast
  - FoxPro on both C and S
  - Access on clients

MC3-PAC-17

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Notes



## Conclusions on DBMS

- Data base systems may be increasingly unnecessary on clients
  - 'Run-time' versions with data
  - No need for data management
- Variety of data base combinations exploding

MC3-PAC-18

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Notes





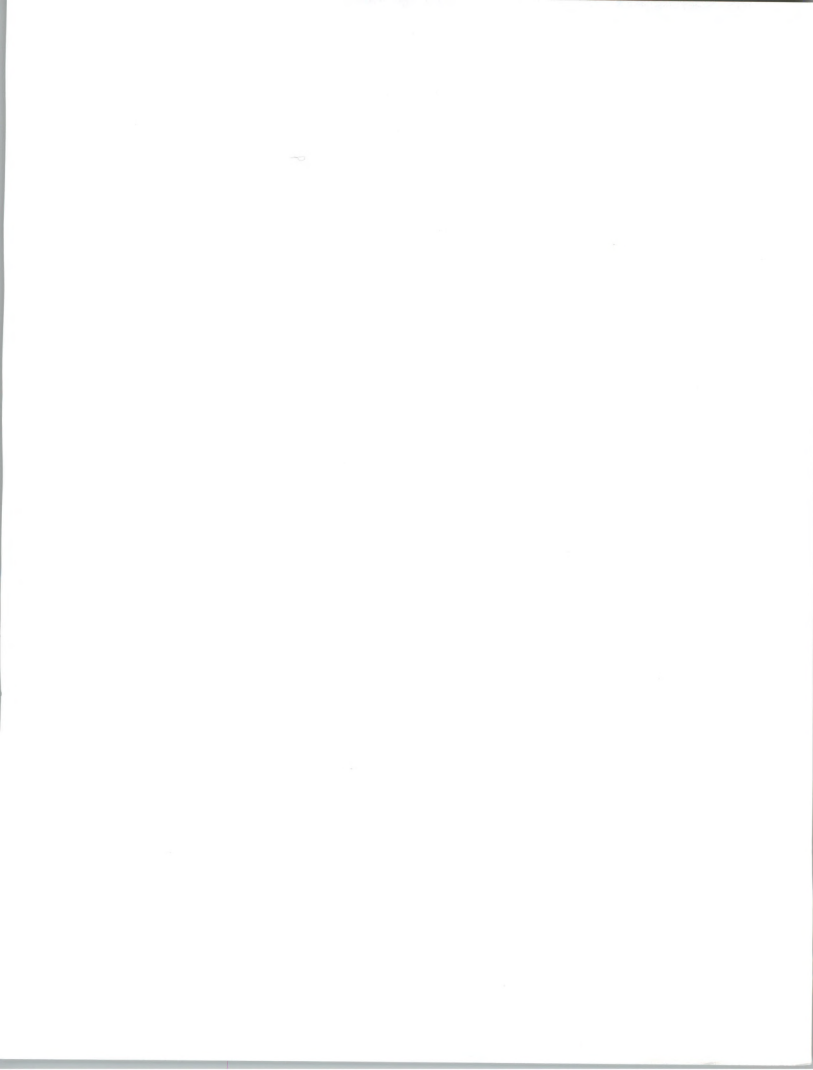
# Vendor Strategies

MC3-PAC-19

INPUT

Notes

9/27/93



## Vendor Strategies Systems Companies

- Establishing C/S units
  - IBM                - Data General
  - Tandem        - Amdahl
- Generally attacking market
  - DEC

MC3-PAC-20a

INPUT

Notes



## Vendor Strategies Systems Companies

- “Cosmetic” approach in many cases
- Attempting to ‘co-opt’ the market
- Supported by consultants/IS managers

MC3-PAC-20b

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Notes



## Vendor Strategies—Software Products Companies

- Running scared/hard
- High-end products
  - Downsizing products
  - Choosing ADEs difficult
  - Dramatically reduced pricing
  - Costly process

INPUT

MC3-PAC-21a

Notes





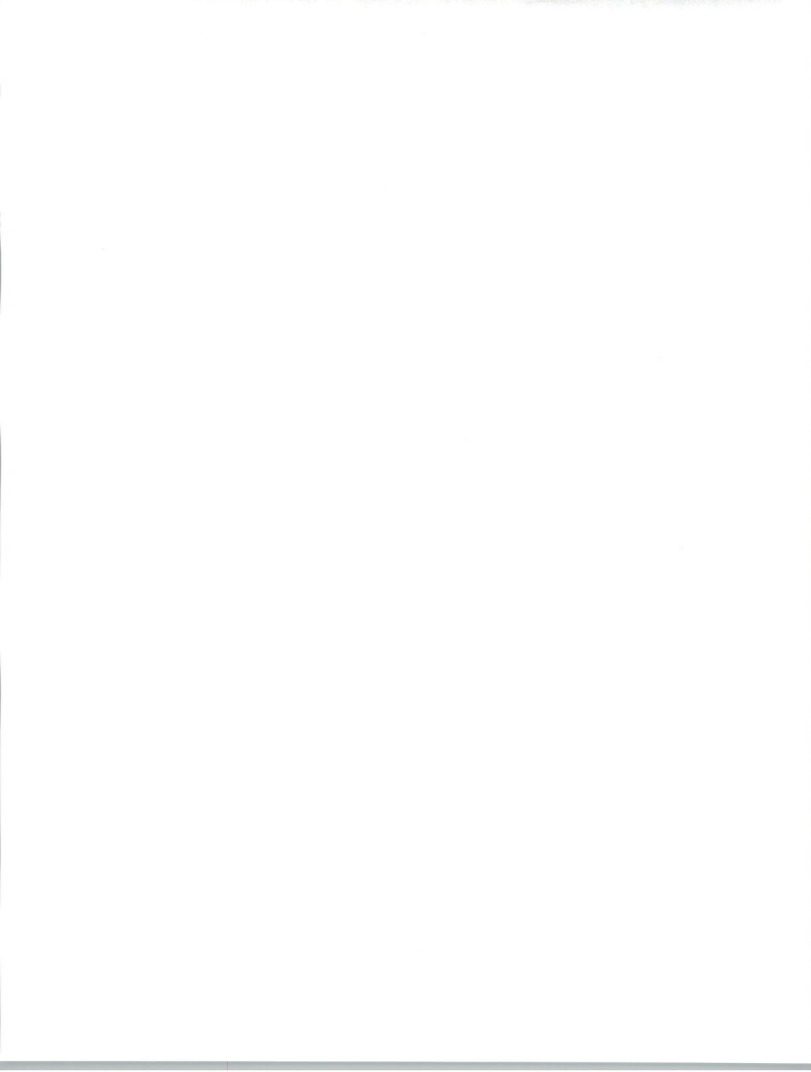
## Vendor Strategies—Software Products Companies

- Low-end products
  - Adding features/functions
  - Potential for network distribution
  - Slowing client growth
  - Server pricing difficult

MC3-PAC-21b

INPUT

Notes



## Vendor Strategies Services Companies

- Integrators leveraging knowledge
  - Andersen, CSC, Systemhouse, TRW
- Professional services companies switching skills
  - CGS, CTG, IMI

INPUT

MC3-PAC-22a

Notes



## Vendor Strategies Services Companies

- Processing companies addressing threats
  - ADP, EDS, TCC
- Network companies seizing opportunities
  - AOL, CompuServe, CONNECT

INPUT

MC3-PAC-22b

Notes



## Vendor Strategies

- Developing software for multiple platforms
- Acquiring/developing C/S skills
- Establishing technology centers
- Struggling with marketing/sales
- Stepping across boundaries

INPUT

MC3-PAC-23

Notes





# Conclusions

MC3-PAC-24

INPUT

Notes



## Conclusions

- Data supports:
  - Movement to users
  - Fragmentation
  - Movement away from "standards"
  - Movement towards interoperability

MC3-PAC-25

INPUT

Notes



## Conclusions

- Changing demand for products and services
  - Targets are more diffused
  - Needs are defined more narrowly
  - Buyers are more 'selfish'

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MC3-PAC-26

Notes

9/27/93



## Conclusions

- C/S accelerates impact of price performance improvements
- Network products/services prime opportunities
- Internet is the network model of the future
- Small ("piggyback") networks will multiply

INPUT

MC3-PAC-27

Notes





## Successful Products and Services—Characteristics

- High-value, low-cost (of ownership)
- On the winning platforms
- Flexible and extendable
- Easily implemented and operated
- Low cost, high value support
- Constantly improved price/performance

INPUT

MC3-PAC-28

Notes



## Successful Products and Services—Marketing

- Win “beauty contests”
- Influence the influencers
- Price properly

MC3-PAC-29

INPUT

Notes



## **PETER A. CUNNINGHAM**

### **PRESIDENT**

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#### **PROFILE**

- Mr. Cunningham has 28 years of experience in the information technology industry, including over 20 years of P&L responsibility in consulting.
- Mr. Cunningham provides information and advice to users and vendors of information technology. He specializes in analysis and forecasting of major trends in the industry, particularly in software, services, and the impact of information technology on people and organizations.
- In 1974, Mr. Cunningham founded INPUT to provide planning services, market research and consulting to buyers and vendors of IT products and services on a worldwide basis. The company specializes in analyzing and forecasting the applications and use of IT, particularly through the information services industry. This industry is now over \$250 billion per year in size and is being driven by trends in outsourcing, systems integration, and downsizing. INPUT's mission is to provide its clients the ability to benefit from these and other IT trends and opportunities.
- Previously, he was a founder and President of J.W. Goodhew and Associates, Inc., a Washington, D.C. data processing consulting company specializing in the Medicaid, association, and manufacturing industries, as well as the federal government. Prior to that, Mr. Cunningham was with Management Science America, responsible for data processing projects in government and industry.
- Mr. Cunningham came to the United States with C-E-I-R, for whom he performed systems development and management.
- Mr. Cunningham started his career with ICL in 1964 in systems software development.

#### **EDUCATION**

- B.Sc. (Physics), Associate of the Royal College of Science, Imperial College, London
- M.P.A. (Technology of Management), The American University, Washington, D.C.

#### **MEMBERSHIPS**

- Fellow of the British Computer Society
- Member of the Worshipful Company of Information Technologists (Guild of the City of London)





