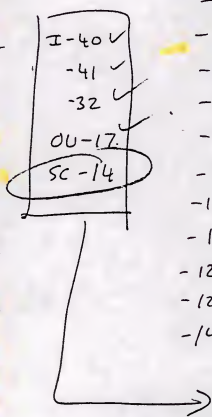


# SOA Titles presentation

## SLIDES

INFORMATION	SYSTEMS	OUTSOURCING	TITLE
MS-13		OU-20 ✓	
MS-6		OU-21 ✓	
MS-7		-30 ✓	
		-36 ✓	
		-37 ✓	
		-38 ✓	
		-39 ✓	
I-1 ✓	SI-1 ✓	SI-113	SO-73 -
..-2 ✓	-2 ✓	-115	-74 ✓
..-9 ✓	-33 ✓	-133	original -76 ✓
..-8 ✓	-34 ✓	-134	-77 ✓
..-11 ✓	-35 ✓	AD-14 ✓ -45 ✓ <del>I-115</del> I-115	-84 ✓
	-49 ✓	SO-1 ✓	-161 ✓
OU-6 ✓	-50 ✓	SO-10 ✓	-94 ✓
OU-2 ✓	-91	-147	-97 ✓
OU-3 ✓	-92	-148	-111 ✓
OU-4 ✓	-93	-11	-112 ✓
OU-5 ✓	-69 ✓	-12 ✓	-117 ✓
<del>OU-6</del>	-70 ✓	-17 ✓	-118 ✓
OU-7 ✓	SI-75	-25 ✓	-126 ✓
OU-9 ✓	-82 ✓	-152	-127 ✓
IS-2 ✓	-84 ✓	-153	-141 ✓
WM-16 ✓	-101	-154	
OU-10 ✓	SI-104	-43 -	
OU-11 ✓	-105	-44 ✓	
OU-12 ✓	-109	-45 ✓	
<del>OU-13</del>	-106	-46 ✓	
-18 ✓			
-19 ✓			





- Introduction
- Information Systems Trends
- "Outsourcing"
- Information Services Markets
- Competition
- Conclusion

MS-13

INPUT

Notes

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect, store, and analyze data. It highlights the need for robust data management systems that can handle large volumes of information efficiently and securely.

3. The third part of the document focuses on the role of data in decision-making and strategic planning. It explains how data-driven insights can help identify trends, opportunities, and risks, enabling the organization to make informed choices and adapt to changing market conditions.

4. The fourth part of the document addresses the challenges and risks associated with data management, such as data security, privacy concerns, and data quality issues. It provides recommendations for mitigating these risks and ensuring the integrity and reliability of the data.

5. The fifth part of the document discusses the importance of data governance and the establishment of clear policies and procedures for data handling. It emphasizes the need for regular audits and monitoring to ensure compliance with relevant regulations and standards.

6. The sixth part of the document explores the role of data in innovation and growth. It explains how data can be used to identify new market opportunities, develop new products and services, and improve existing ones, ultimately driving the organization's success.

7. The seventh part of the document discusses the importance of data literacy and the need for ongoing training and education for employees. It emphasizes that data is a valuable asset, and all employees should have the skills and knowledge to effectively use it.

8. The eighth part of the document provides a summary of the key points discussed and offers final thoughts on the importance of data in the modern business environment. It concludes that data is the foundation of success, and organizations must invest in data management to thrive in the long run.

9. The ninth part of the document discusses the importance of data security and the need for robust security measures to protect sensitive information. It highlights the various threats to data security, such as malware, phishing, and insider threats, and provides recommendations for preventing these threats and responding to incidents.

10. The tenth part of the document discusses the importance of data privacy and the need for organizations to be transparent about their data practices. It explains the various regulations and standards that govern data privacy, such as the GDPR and the CCPA, and provides recommendations for ensuring compliance with these regulations.

11. The eleventh part of the document discusses the importance of data quality and the need for organizations to ensure that their data is accurate, complete, and up-to-date. It explains the various factors that can affect data quality, such as data entry errors and data integration issues, and provides recommendations for improving data quality.

12. The twelfth part of the document discusses the importance of data integration and the need for organizations to ensure that their data is accessible and usable across different systems and departments. It explains the various challenges associated with data integration, such as data silos and data inconsistency, and provides recommendations for overcoming these challenges.

13. The thirteenth part of the document discusses the importance of data visualization and the need for organizations to use clear and concise visual representations of their data. It explains the various types of data visualizations, such as charts, graphs, and dashboards, and provides recommendations for choosing the right visualization for each data set.

14. The fourteenth part of the document discusses the importance of data collaboration and the need for organizations to share their data and insights with other departments and stakeholders. It explains the various benefits of data collaboration, such as improved decision-making and increased innovation, and provides recommendations for fostering a culture of data collaboration.

15. The fifteenth part of the document discusses the importance of data ethics and the need for organizations to ensure that their data practices are fair, transparent, and respectful of individual rights. It explains the various ethical considerations associated with data management, such as bias and discrimination, and provides recommendations for addressing these considerations.

16. The sixteenth part of the document discusses the importance of data sustainability and the need for organizations to ensure that their data practices are environmentally friendly and socially responsible. It explains the various ways in which data management can contribute to sustainability, such as reducing energy consumption and promoting social equality, and provides recommendations for implementing sustainable data practices.

17. The seventeenth part of the document discusses the importance of data innovation and the need for organizations to explore new and creative ways to use their data. It explains the various emerging technologies and trends in data management, such as artificial intelligence and blockchain, and provides recommendations for staying up-to-date with the latest innovations.

18. The eighteenth part of the document discusses the importance of data leadership and the need for organizations to have a clear vision and strategy for their data management. It explains the various roles and responsibilities of data leaders, such as data analysts and data scientists, and provides recommendations for building a strong data leadership team.

19. The nineteenth part of the document discusses the importance of data culture and the need for organizations to create a culture that values data and encourages data-driven decision-making. It explains the various factors that can influence data culture, such as leadership and employee attitudes, and provides recommendations for building a strong data culture.

20. The twentieth part of the document discusses the importance of data future and the need for organizations to prepare for the challenges and opportunities of the future. It explains the various trends and challenges that will shape the future of data management, such as the increasing volume of data and the growing importance of data security, and provides recommendations for preparing for the future.

# INPUT

Market Research and Consultancy

Information Services Industry

15 Years in Business

100 Employees

MS-6

INPUT

Notes



# INPUT

California, New York, Washington D.C.,  
London, Paris, Tokyo

Primary Research Emphasis

Senior Executives Experienced in  
Information Services

Forecast from Comprehensive Data Base

MS-7

INPUT

Notes

1850

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1900



# Information Systems

I- 1

INPUT

Notes

# THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY  
5780 SOUTH CAMPUS DRIVE  
CHICAGO, ILLINOIS 60637  
TEL: 773-936-3700  
WWW.CHEM.UCHICAGO.EDU

# Fundamental Driving Forces

## *Key Business Trends:*

- Shorter product life cycles
- More customization/specialization
- Narrower market segments
- Higher impact of technology
- More competition from overseas vendors

I- 2

INPUT

Notes

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
5800 S. UNIVERSITY AVENUE  
CHICAGO, ILLINOIS 60637  
TEL: (773) 835-3100  
FAX: (773) 835-3101  
WWW: WWW.CHEM.UCHICAGO.EDU

## IS Trends

- IS to reduce costs
- IS for competitive advantage
- Mission-critical systems
- Inter-enterprise systems
- Integrated customer-oriented systems

I- 9

INPUT

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1884

# Where's the Productivity?

I- 8

INPUT

Notes





# Make vs. Buy

I-11

INPUT

Notes



Outsourcing is the contracting of information systems (IS) functions to external vendors.

OU-6

INPUT

Notes

# Quality of Life in Older Adults with Alzheimer's Disease and Dementia in Residential Care

John E. Birrell,<sup>1</sup> David C. Reardon,<sup>2</sup> & Robert M. Kaplan,<sup>3</sup>  
with the assistance of the Alzheimer's Disease and Memory  
Assessment Center, University of Michigan

Received 12/1/09; accepted 1/15/10; published online 3/15/10

**Keywords:** dementia, quality of life, residential care, Alzheimer's disease

**Abstract:** This study examined the quality of life of older adults with

Alzheimer's disease and dementia in residential care. The study

examined the quality of life of older adults with Alzheimer's disease

and dementia in residential care. The study examined the quality of

life of older adults with Alzheimer's disease and dementia in

residential care. The study examined the quality of life of older

# Beyond Products: Service-Based Strategy

HBR March/April 1990

OU-2

INPUT

Notes

# 1997-1998 Annual Report

1997-1998

Category	1997-1998	1996-1997
Revenue	100	100
Expenses	100	100
Surplus/Deficit	0	0
Assets	100	100
Liabilities	100	100
Equity	100	100

# Key Findings

- Value added from services
- Technology enhances services
- Services enable competitive differentiation

Source: HBR Article

INPUT

OU-3

Notes

# Document Title

Main body of text, containing the primary content of the document.

Additional text at the bottom of the page, possibly including a footer or concluding remarks.



# Recommendations

- Focus on core services
- Outsource other activities

Source: HBR Article

INPUT

OU-4

Notes

# PROBATION DEPARTMENT

STATE OF CALIFORNIA

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# Outsourcing

- Outsource non-competitive activities
- Outsourcing builds flexibility
- Outsourcing allows focus

Source: HBR Article

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OU-5

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## DECLARATION

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# IS Outsourcing Areas

1. Development
2. Operation and maintenance

OU-7

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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 435

LECTURE 1

LECTURE 1: INTRODUCTION TO QUANTUM MECHANICS

1.1 THE CLASSICAL LIMIT

1.2 THE QUANTUM LIMIT

1.3 THE CORRESPONDENCE PRINCIPLE

1.4 THE HEISENBERG UNCERTAINTY PRINCIPLE

1.5 THE SCHRÖDINGER EQUATION

1.6 THE WAVEFUNCTION

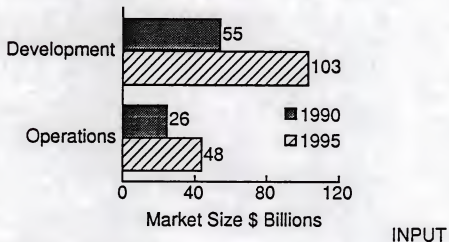
1.7 THE PROBABILITY DENSITY

1.8 THE EXPECTED VALUE

1.9 THE ENERGY EIGENFUNCTIONS

1.10 THE TIME-DEPENDENT SCHRÖDINGER EQUATION

## U.S. IS Outsourcing Markets, 1990-1995



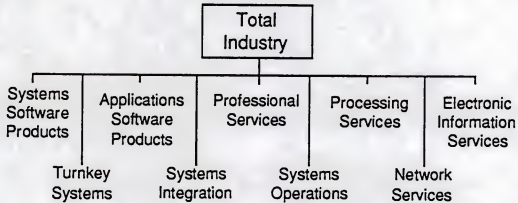
OU-9

### Notes





# Information Services Industry Structure



INPUT  
MPRE-3

Notes

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It also outlines the various methods used to collect and analyze data, including surveys and interviews.

3. The results of the study are presented in a series of tables and graphs, showing a clear trend over time.

4. Finally, the document concludes with a series of recommendations for future research and practice.

5. The overall findings of the study are highly significant and have important implications for the field.

6. The data clearly shows that there is a strong correlation between the variables being studied.

7. This suggests that the model being tested is a good representation of the underlying process.

8. The study also highlights the need for further research in this area, particularly in the context of the current environment.

9. The findings of this study provide a solid foundation for future work in this field.

10. The results are consistent with previous research and provide new insights into the phenomenon being studied.

11. The study also identifies some limitations and areas for future research, which are discussed in detail.

12. The overall conclusion is that the study has made a valuable contribution to the understanding of the topic.

13. The findings are robust and have been verified through a series of statistical tests.

14. The study is a clear example of high-quality research and provides a model for future studies.

## Information Services Market Penetration Worldwide

	Expenditures (\$ Billions)	
	1989	1994
Information Systems	840	1,420
Information Services*	170	380
Penetration	20%	27%

\* Less electronic information services

INPUT  
MPRE-186

Notes



## "Outsourcing" vs. Buying Services

1980s: Services achieved  
recognition

1990s: Overcome prejudice  
against buying management  
services

OU-10

INPUT

Notes



## "Outsourcing" vs. Buying Services

- Greater commitment on part of buyer
- "Partnership"
- Responsibility/risk for vendors

OU-11

INPUT

Notes

# THEORY OF COMPUTATION

The theory of computation is a branch of computer science that deals with the limits of what can be computed. It is concerned with the design and analysis of algorithms and the complexity of computation. The theory of computation is divided into three main areas: automata theory, computability theory, and computational complexity theory.

Automata theory is the study of abstract machines and the problems that can be solved by them. It is concerned with the design and analysis of algorithms and the complexity of computation. The theory of computation is divided into three main areas: automata theory, computability theory, and computational complexity theory.

Computability theory is the study of the limits of what can be computed. It is concerned with the design and analysis of algorithms and the complexity of computation. The theory of computation is divided into three main areas: automata theory, computability theory, and computational complexity theory.

Computational complexity theory is the study of the complexity of computation. It is concerned with the design and analysis of algorithms and the complexity of computation. The theory of computation is divided into three main areas: automata theory, computability theory, and computational complexity theory.



# Focus

Systems integration (SI)

Systems operations (SO)

OU-12

INPUT

Notes

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text notes that clear documentation helps in identifying trends, resolving disputes, and ensuring compliance with relevant regulations.

2. The second part of the document outlines the various methods and tools used for data collection and analysis. It mentions the use of spreadsheets, databases, and specialized software to organize and process large volumes of information. The text also highlights the importance of data security and privacy, advising on best practices for protecting sensitive information from unauthorized access and breaches.

3. The third part of the document focuses on the application of the collected data. It describes how the information is used to generate reports, make strategic decisions, and optimize operations. The text notes that data-driven insights are crucial for identifying areas of improvement and maximizing efficiency. It also mentions the role of data in forecasting and risk management, providing a clear picture of future trends and potential challenges.

4. The final part of the document concludes by summarizing the key points and reiterating the importance of a data-centric approach. It encourages the implementation of robust data management systems and the continuous monitoring and updating of records to ensure their relevance and accuracy. The text ends with a call to action, urging stakeholders to embrace data as a valuable asset for driving growth and innovation.

# Evolution of Outsourcing

Type of Product or Service	1970s	1990s
Applications Software	Applications Packages	Applications Management
Professional Services	Consulting Contract Prog	Systems Integration
Processing Services	Specific Proc Serv	Systems Operations

INPUT

OU-18

Notes



# Outsourcing in the 1990s

## What is Different

- Size and length of commitment
- Breadth of responsibility assumed by vendor
- Partnership versus supplier/subcontractor

OU-19

INPUT

Notes

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 551

LECTURE NOTES

BY

JOHN H. COOPER

AND

DAVID J. WILSON

## Outsourcing in the 1990s What is Different

- Complexity of IT solutions
- Professional services component
- Systems management

OU-20

INPUT

Notes

# Effect of Stimulus Generalization on the Acquisition of a New Response

WILLIAM J. RAYBURN

University of North Carolina at Greensboro

DAVID M. COOPER

University of North Carolina at Charlotte

Abstract: The effects of stimulus generalization on the acquisition of a new response were examined.

Subjects were trained to respond to a stimulus and then to a new stimulus.

The results showed that the acquisition of the new response was faster when the new stimulus

was similar to the original stimulus than when it was dissimilar.

This effect was attributed to the generalization of the response from the original stimulus to the new stimulus.

Keywords: stimulus generalization, response acquisition, behavior change

Stimulus generalization is a well-documented phenomenon in behavior analysis.

It is defined as the transfer of a response from a stimulus to a new stimulus.

Stimulus generalization has been studied in a variety of animals and humans.

One of the most well-known studies of stimulus generalization was conducted by

Pavlov (1927). He trained a dog to respond to a bell and then to a new bell.

The results showed that the dog responded to the new bell as well as the original bell.

This effect was attributed to the generalization of the response from the original stimulus to the new stimulus.

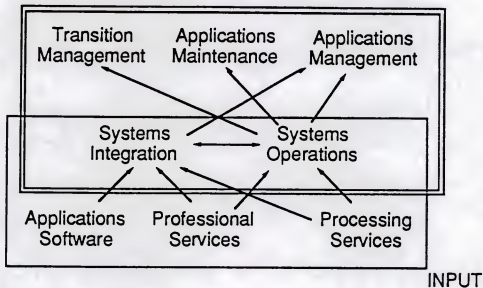
Stimulus generalization has also been studied in humans. For example, Cooper and

Rayburn (1997) trained subjects to respond to a stimulus and then to a new stimulus.

The results showed that the acquisition of the new response was faster when the new stimulus



# Systems Management Opportunities



OU-21

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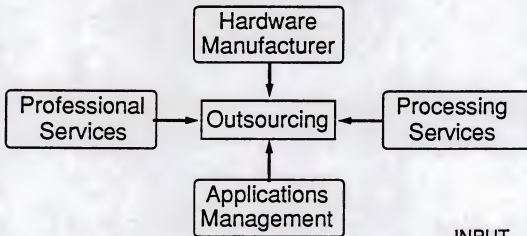
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# Vendor Orientation to Outsourcing



OU-30

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# Organizational Impacts

Group	Impacts
Total Organization	No visible impact Reallocation of personnel Faster access to skills More disciplined implementation

OU-36

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# Organizational Impacts

Group	Impacts
Information Systems Management	Manage a smaller organization Shift to tactics and strategy Time available for planning

OU-37

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Notes

Date	Description



# Organizational Impacts

Group	Impacts
Information Systems Professional	Significant initial anxiety Greater career opportunities

OU-38

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Notes



## Conclusions User View

- Outsourcing is different for the 1990s
- Outsourcing offers new opportunities
- Outsourcing can lead to faster response
- Outsourcing can help IS change its role

OU-39

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12/13/90



# Systems Integration

SI- 1

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## FOR THE RECORD

### THE STATE OF TEXAS, COUNTY OF \_\_\_\_\_

Know all men by these presents, that \_\_\_\_\_

of the County of \_\_\_\_\_ State of Texas,

do hereby certify that \_\_\_\_\_

is the true and correct copy of \_\_\_\_\_

as the same appears from the \_\_\_\_\_

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## SI Definition

- Vendor-provided service
- Complete solution to complex requirement for:
  - Information systems
  - Networking
  - Automation
- Custom selection and implementation of products and services

SI- 2

INPUT

Notes





## SI Characteristics

- Vendor responsibility
- Vendor risk assumption
- Solutions requirement

SI-33

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## SI Market Factors

- Demand for connectivity
- Major infrastructure rebuilding
- User management trend
- Application complexity

SI-34

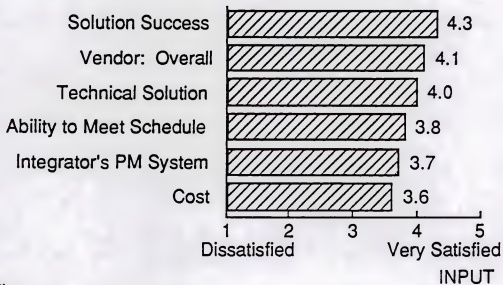
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Notes

THE UNIVERSITY OF CHICAGO  
PHYSICS DEPARTMENT  
5720 S. UNIVERSITY AVE.  
CHICAGO, ILL. 60637  
TEL: 773-936-3700  
FAX: 773-936-3701  
WWW: WWW.PHYSICS.DUKE.EDU

PHYSICS 440  
LECTURE 1  
MAY 1998

## Buyer/User Satisfaction



SI-35

Notes

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial statements and for providing a clear audit trail. The text also mentions that proper record-keeping is essential for identifying and correcting errors in a timely manner.

2. The second part of the document focuses on the role of internal controls in preventing fraud and misstatements. It highlights that a strong internal control system is necessary to ensure that all transactions are properly authorized, recorded, and classified. The text also notes that internal controls should be designed to provide reasonable assurance of the reliability of the financial reporting process.

3. The third part of the document discusses the importance of segregation of duties. It explains that this principle is essential for reducing the risk of errors and fraud by ensuring that no single individual has control over all aspects of a transaction. The text also mentions that segregation of duties should be implemented in a way that is practical and efficient.

4. The fourth part of the document discusses the importance of regular reconciliations. It explains that reconciling accounts and statements is a key component of the accounting process that helps to ensure that the financial records are accurate and up-to-date. The text also notes that reconciliations should be performed on a regular basis and by someone other than the person who prepared the original entries.

5. The fifth part of the document discusses the importance of maintaining proper documentation. It explains that all transactions should be supported by appropriate evidence, such as invoices, receipts, and contracts. The text also mentions that this documentation is essential for providing a clear audit trail and for defending against claims of fraud or misstatements.

6. The sixth part of the document discusses the importance of maintaining proper custody of assets. It explains that all assets should be properly identified, recorded, and protected. The text also mentions that this is essential for ensuring that the assets are accounted for and that they are not lost, stolen, or misappropriated.

7. The seventh part of the document discusses the importance of maintaining proper custody of records. It explains that all records should be properly stored, protected, and disposed of. The text also mentions that this is essential for ensuring that the records are available when needed and that they are not damaged or destroyed.

8. The eighth part of the document discusses the importance of maintaining proper custody of information. It explains that all information should be properly collected, processed, and disseminated. The text also mentions that this is essential for ensuring that the information is accurate and that it is used for its intended purpose.

9. The ninth part of the document discusses the importance of maintaining proper custody of the financial reporting process. It explains that all steps in the process should be properly documented and controlled. The text also mentions that this is essential for ensuring that the financial statements are prepared in accordance with the applicable accounting standards and that they are free from material misstatements.

10. The tenth part of the document discusses the importance of maintaining proper custody of the financial reporting process. It explains that all steps in the process should be properly documented and controlled. The text also mentions that this is essential for ensuring that the financial statements are prepared in accordance with the applicable accounting standards and that they are free from material misstatements.

## Major Vendor Issues—1990

- Increasing competition
  - Skills
  - Clients
- Full service suppliers
  - "Business change" consulting
  - Systems operations

SI-49

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2022-2023  
2023-2024  
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## Major Vendor Issues—1990

- Investment in repeatable solutions
  - Risk reduction
  - Productivity
- Consolidations and alliances

SI-50

INPUT

Notes

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## Recent SI Contracts

Vendor	Client
DEC	Nissan - production management
	Canada - Treasury Board
EDS	Florida - Human Services
	Chicago - Parking Authority

SI-91

INPUT

Notes



## Recent SI Contracts

Vendor	Client
Andersen	Boeing - Document processing Texas - Accounting
IBM	Burroughs Wellcome - Plant automation Rockwell Automotive - Production control

SI-92

INPUT

Notes



## Recent SI Contracts

Vendor	Client
Perot	McGraw-Hill - Publishing system
SHL Systemhouse	Los Angeles - Court system

SI-93

INPUT

Notes

1/21/91





## Trends

- SI Market Drivers
  - Customer business needs
  - Technology application
  - Personnel constraints
  - Vendor profit/channels

SI-69

INPUT

Notes

1. The first part of the document discusses the importance of maintaining accurate records.

2. It then outlines the various methods used to collect and analyze data.

3. The results of the study are presented in the following section.

4. Finally, the document concludes with a summary of the findings and recommendations.

5. The following table provides a detailed breakdown of the data collected.

6. The data shows a clear trend in the number of cases over time.

7. This trend is consistent with the theoretical model proposed.

8. The findings have significant implications for policy-making.

9. Further research is needed to explore the underlying causes.

10. The document is organized into several sections for clarity.

11. Each section is clearly labeled and easy to navigate.

12. The use of tables and graphs helps to illustrate the data.

13. The overall structure is logical and easy to follow.

14. The document is well-written and easy to read.

15. It provides a comprehensive overview of the topic.

16. The conclusions are based on solid evidence and analysis.

17. The recommendations are practical and actionable.

18. The document is a valuable resource for anyone interested in the topic.

19. It is well-referenced and includes a bibliography.

20. The document is available in both print and electronic formats.

21. It is a high-quality document that meets the highest standards.

22. The document is a model of clarity and precision.

23. It is a must-read for anyone in the field.

24. The document is a testament to the power of good writing.

25. It is a valuable contribution to the field.

26. The document is a masterpiece of scholarship.

27. It is a work of art that is both informative and beautiful.

28. The document is a true gem of the modern era.

29. It is a work that will stand the test of time.

30. The document is a masterpiece of human achievement.

## Trends

- Buyer Emphasis
  - Users becoming buyers
  - Interest in solutions, not technology
  - Preference for industry knowledge
  - Project management key
  - Acceptance by performance

SI-70

INPUT

Notes



# Network Integration

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## A Growing Opportunity

SI-75

INPUT

Notes

11/20/90

1912

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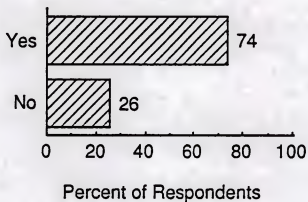
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## Network Integration Users Planned Projects



SI-82

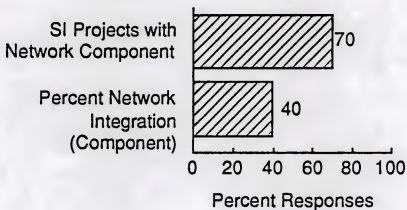
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Notes





## Network Portion of Systems Integration Projects



SI-84

INPUT

Notes



## Network Integration Leading Vendors\*

- IBM
- AT&T
- DEC
- Novell
- 3Com

\* User perception

SI-101

INPUT

Notes



# Computer-Integrated Manufacturing and Systems Integration

SI-104

INPUT

Notes

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## Forces Driving Change in Manufacturing Companies

- Global market
- Increased competition
- Technology
- Core business focus

SI-105

INPUT

Notes

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DEPARTMENT OF CHEMISTRY  
RESEARCH REPORT

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M. GOLDSTEIN

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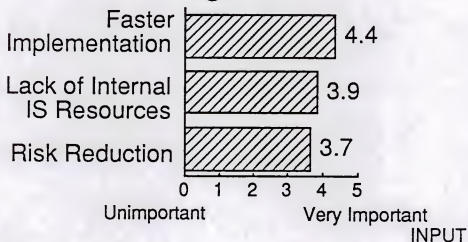
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## Reasons for Using a CIM Integrator

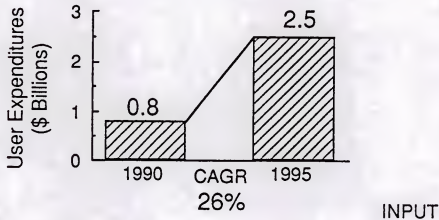


SI-109

Notes



## CIM Systems Integration Market, 1990-1995



SI-106

Notes

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OF

SCOTLAND

AND

OF GREAT BRITAIN

IN

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# Systems Integration Electronic Imaging Market

SI-113

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## SI Electronic Image Justification

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

SI-115

INPUT

Notes





## Imaging Systems Integrators

Vendor	Percent User Responses
Andersen Consulting	62
TRW	39
Integrated Automation	31

SI-133

INPUT

Notes



## Imaging Systems Integrators

Vendor	Percent User Responses
IBM	23
AMS	23
Wang	23
EDS	23

SI-134

INPUT

Notes



## CASE—User Perspective

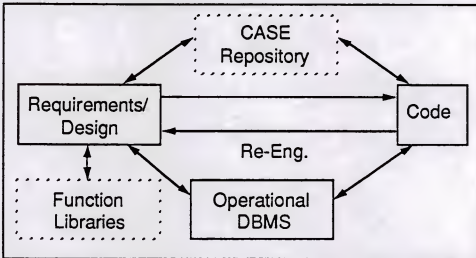
- Real productivity problem
- Backlog problem continues
- Lingering resistance to disciplined development processes

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MPRE-68a

Notes



## Emerging CASE Environment



Development Management

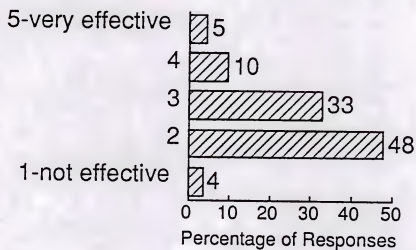
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Notes





## Effectiveness of CASE



I-115

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Notes



# Systems Operations

SO- 1

INPUT

Notes

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## Systems Operations Driving Forces

- Core business focus
- Business transition
- Expense reduction
- Capital preservation

SO-10

INPUT

Notes

rev. 11/25/90



## Systems Operations Driving Forces

- Increasing complexity of operations
- Scarcity and expense of required talents
- Costs and problems of systems upgrades

SO-147

INPUT

Notes

# 2000-2001

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# Systems Operations Driving Forces

- Service level requirements
- Backup requirements

SO-148

INPUT

Notes

2/6/91



# Systems Operations Driving Forces

- Systems integration creates opportunities
- Reduction of costs through sharing
  - People
  - Software
  - Computer systems
  - Networks

INPUT

SO-11

Notes



## Systems Operations and Competitive Advantage

- Operations advantages hard to achieve
- Avoidance of operations disadvantages imperative
- Advantage/disadvantage comes from applications

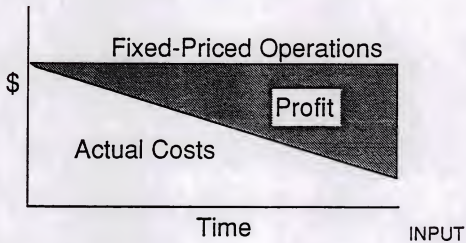
SO-12

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Notes

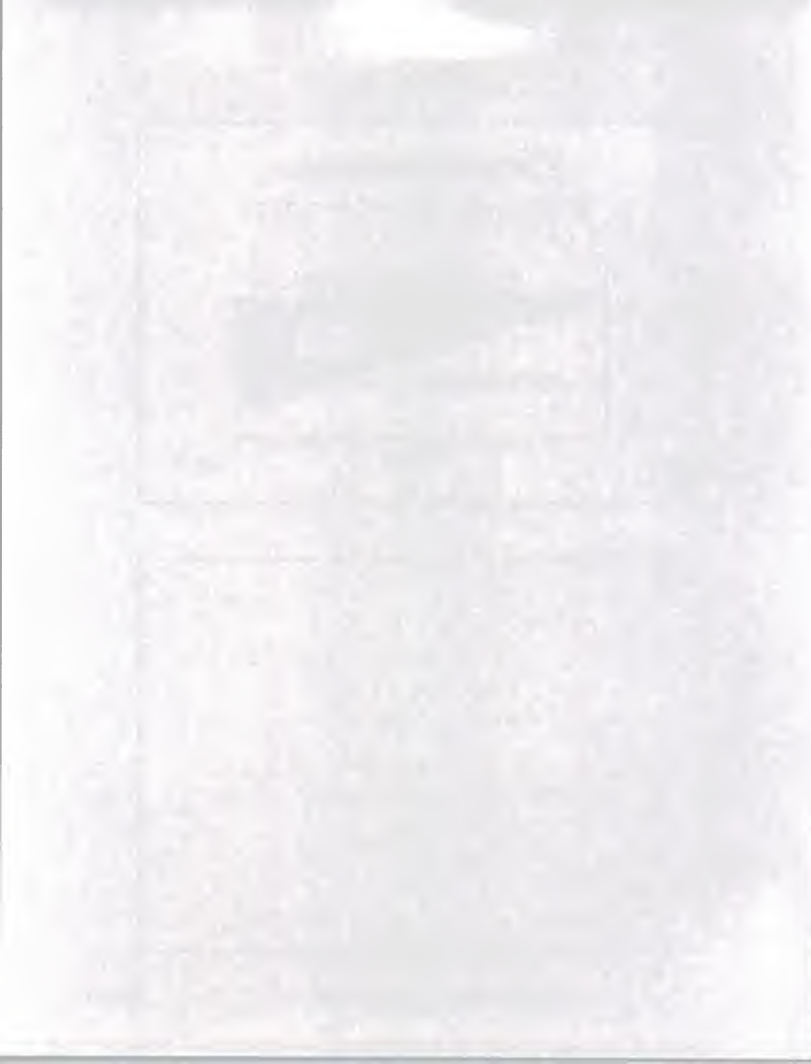


# Systems Operations Efficiency Yields Profits



SO-17

Notes





## Leading U.S. SO Vendors

Vendor	Market Share (Percent)
EDS	16
CSC	5
Systematics	3
Affiliated Computing	2
SMS	2
SIAC	2
BCS	2

SO-25

INPUT

Notes

rev. 11/25/90



## Recent SO Contracts

Vendor	Client
Andersen Consulting	Sun, Maxus Energy Corp.
EDS	Columbia Pictures, First Fidelity Bancorp, Cummins Engine, National Rental

SO-152

INPUT

Notes



## Recent SO Contracts

Vendor	Client
IBM	Kodak, Bank South, First Tennessee Bank
Digital	Kodak, Treasury Board of Canada
Systematics	Regional Banks

SO-153

INPUT

Notes



## Recent SO Contracts

Vendor	Client
Perot	American Medical International, NCNB
CSC	National Oceanic & Atmospheric Admin., U.S. Postal Service

SO-154

INPUT

Notes

# Mathematical Proof

Let  $P$  and  $Q$  be propositions. We aim to prove that  $P \implies Q$ .

Assume  $P$  is true. We will show that  $Q$  must also be true under this assumption.

Consider the following cases:

- Case 1: If  $A$  is true, then  $B$  is true, which implies  $Q$ .
- Case 2: If  $A$  is false, then  $C$  is true, which also implies  $Q$ .

Since both cases lead to  $Q$ , we conclude that  $Q$  is true whenever  $P$  is true.

Therefore,  $P \implies Q$  is proven.

Q.E.D.



## Systems Operations Buyers' Initial Evaluation Criteria

Ranking	Criteria
1	Better or more-flexible service
2	Availability of operations skills internally
3	Lower operating expenses
4	Faster application changes
5	Data security/privacy
6	Faster new application development

SO-43

INPUT

Notes



## Systems Operations Buyers' Initial Evaluation Criteria

Ranking	Criteria
7	Ability to add/delete personnel
8	Reduced capital investment requirements
9	Mission-critical application
10	Near-term cash flow improvements
11	Labor relations/unions
12	Executive time commitment

SO-44

INPUT

Notes



## Systems Operations Vendor Selection Criteria—Buyers' View

Ranking	Criteria
1	Vendor SO experience
2	Overall cost
3	Data security and protection
4	SO performed by prime SI contractor
5	Vendor-provided hardware and systems software maintenance
6	Application software maintenance

SO-45

INPUT

Notes



## Systems Operations Vendor Selection Criteria—Buyers' View

Ranking	Criteria
7	Reduced capital investment
8	Near-term cash flow improvements
9	SO performed in client facility
10	Labor relations/unions
11	SO performed in vendor location

SO-46

INPUT

Notes





# SO Definition

Contracting for all or a major portion of an IS operation on a long-term (more than one year) basis

SO-73

INPUT

Notes



# Types of SO

- Platform (utility) systems operations
  - Network
  - Computers
- Applications systems operations

INPUT

SO-74

Notes



## Perceived SO Inhibitors

- Cost
- Employee loyalty
- Vendor employee turnover
- Loss of control
- Acceptance by user community

SO-76

INPUT

Notes



# SO Vendor Issues

- Account control
- Potential conflicts of interest
- Profit maximization vs. performance

SO-77

INPUT

Notes





# Network Operations Management

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1990-1995

SO-84

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Notes

11/9/90

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PHILOSOPHY DEPARTMENT

PHILOSOPHY 101

LECTURE NOTES

BY

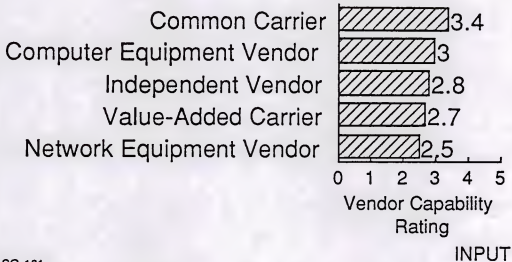
PROFESSOR

JOHN

SMITH

1998

## Few Vendors Can Meet User Needs



SO-161

Notes

2/6/91



## Primary Reasons for Contracting

- Private organizations
  - Business focus
  - Financial savings

SO-94

INPUT

Notes



## Systems Operations Inhibitors

- Savings uncertainty
- Personnel concerns
- Loss of control
- Service quality
- Organizational threats

SO-97

INPUT

Notes





# SO Growth Factors

(Users' Viewpoint)

- Business
  - Financial/economic incentives
  - Increased core business focus
  - Better management of change
  - Management frustration with operations

SO-111

INPUT

Notes

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## SO Growth Factors (Users' Viewpoint)

- Technology
  - Need for improved reliability
  - Changing technology
  - Trend toward "lights out" operations

SO-112

INPUT

Notes



## Staffing Changes

- Went from 300 to 5 people (bank)
- Staff changed from 64 to 36 (govt. agy.)
- Took staff from 70 to 0 (ret. dist.)

SO-117

INPUT

Notes



## Personnel Transfer Policies

- Guaranteed employment term with vendor
- Transfer employment and benefits

SO-118

INPUT

Notes

12/11/90

Date	Description	Debit	Credit	Balance
1890				
Jan 1	Balance forward			
Jan 15	...			
Jan 31	...			
Feb 1	...			
Feb 15	...			
Feb 28	...			
Mar 1	...			
Mar 15	...			
Mar 31	...			
Apr 1	...			
Apr 15	...			
Apr 30	...			
May 1	...			
May 15	...			
May 31	...			
Jun 1	...			
Jun 15	...			
Jun 30	...			
Jul 1	...			
Jul 15	...			
Jul 31	...			
Aug 1	...			
Aug 15	...			
Aug 31	...			
Sep 1	...			
Sep 15	...			
Sep 30	...			
Oct 1	...			
Oct 15	...			
Oct 31	...			
Nov 1	...			
Nov 15	...			
Nov 30	...			
Dec 1	...			
Dec 15	...			
Dec 31	...			



## Systems Operations Benefits (Users' Viewpoint)

- Business
  - Cost reduction/savings
  - Increased business focus
  - Improved career path
  - Predictability

SO-126

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# Systems Operations Benefits

(Users' Viewpoint)

- Technology
  - Access to better technology
  - Improved service quality
  - Improved reliability

SO-127

INPUT

Notes



## Vendor Strategies

- Buy client assets
- Invest in client business
- Hire client staff
- Global networks add flexibility
- Project managers critical

SO-141

INPUT

Notes



## Evolution of CIO Role

- Role will not disappear
- Same objectives/problems
- More focus on strategy/planning
- Less focus on systems development/operations
- Stronger focus on telecom/network

I-40

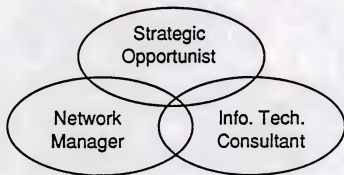
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Notes





## Information Systems Executive Role in the 1990s



An Internal "Systems Integrator"

I- 41

INPUT

Notes



# Corporate Organization

- IT and IS will change the organization
- How will it operate?
- People
  - How many?
  - When?
  - What skills?

I-32

INPUT

Notes



Potential for  
revolution is there.

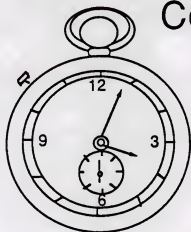
Forecasts are based  
on evolution.

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OU-17

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## Conclusions

"Time—  
The next source of  
competitive advantage"

- HBR July/August 1988

- Attack opportunities
- Adjust to the requirements

INPUT

SC-14

Notes

