

INFORMATION SYSTEMS  
PROGRAM

ANNUAL REPORT

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INPUT

NOVEMBER 1987

INPUT

NOTES:

UP87: I-1

INPUT



## OVERVIEW

- Objectives
- Annual Planning Procedures
- Major Issues
  - Driving Forces
  - Issues and Objectives
  - New Technology
- New Applications
- Budget Analysis

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NOTES:

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INPUT



## OBJECTIVES

- Identify and Analyze
  - Business Forces Impacting Information Systems
  - New Technologies of High Impact
  - Trends in Information Systems Spending
  
- Provide INPUT's Views on
  - Resulting Objectives for IS
  - Key Opportunities & Applications Trends

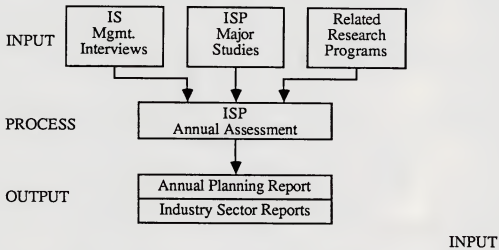
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NOTES:

UP87: I-3



## INFORMATION SYSTEMS PROGRAM ANNUAL PLANNING REPORT PROCESS



NOTES:

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INFORMATION SYSTEMS  
PROGRAM

ANNUAL REPORT

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MAJOR ISSUES

INPUT

NOTES:

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## ISSUE HIERARCHY

MAJOR ISSUE SECTION	FOCUS	TIMEFRAME
Driving Forces	Strategic	Over 3 Years
Issues	Tactical	2 - 3 Years
Objectives	Operational	0 to 2 Years

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NOTES:

UP87: II-2



## DRIVING FORCES

- Rising Expectations of Senior Management
- Expanding Wealth of New Technologies
- Cost-Sensitive Business Environment

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## DRIVING FORCES (Continued)

- Ability to Conceptualize More Complex Applications
- Growing Interaction Between Large Corporations
- Unstable Organizational Environments

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NOTES:

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## MAJOR ISSUES-1988 AND BEYOND

- Data Management
- Connectivity
- Integration
- User Involvement
- Development Productivity
- Business Contribution

INPUT

NOTES:

UP87: II-5

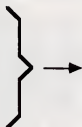
INPUT



## MAJOR ISSUES

ELEMENTS

Current  
Status/  
Activities



INPUT

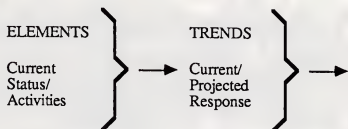
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UP87: II-6

INPUT



## MAJOR ISSUES



INPUT

NOTES:

UP87: II-7

INPUT



## MAJOR ISSUES



INPUT

NOTES:

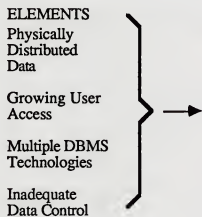
UP87: II-8

INPUT





## MAJOR ISSUE-DATA MANAGEMENT



INPUT

NOTES:

UP87: II-9



## MAJOR ISSUE-DATA MANAGEMENT

TRENDS

Move to RDBMS

Adopting DBMS  
on Distributed  
Systems

Renewed Move  
to Data  
Dictionaries



INPUT

NOTES:

UP87: II-10

INPUT



## MAJOR ISSUE-DATA MANAGEMENT

### OBJECTIVES

Learn RDBMS

→ Train the User  
on RDBMS

Select a  
Standard for  
Each Level

Strengthen Data  
Processes

INPUT

NOTES:

UP87: II-11

INPUT



## MAJOR ISSUE-INTEGRATION

ELEMENTS  
Multivendor  
Environments

Computer to  
Computer  
Data Transfer

Larger, More  
Complex  
Applications

Data Transfer  
to Outsiders



INPUT

NOTES:

UP87: II-12

INPUT





## MAJOR ISSUE-INTEGRATION

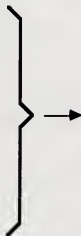
### TRENDS

Dist'd. Processing  
Strategies

Vendor  
Support for  
Standards

Purchase  
Decisions Tied  
to Integration

Outside Expertise



INPUT

NOTES:

UP87: II-13

INPUT



## MAJOR ISSUE-INTEGRATION

### OBJECTIVES

Standards,  
Standards,  
Standards



Pressure  
the Vendor

Educate  
the User

INPUT

NOTES:

UP87: II-14

INPUT



## MAJOR ISSUE-CONNECTIVITY

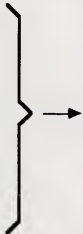
### ELEMENTS

More PCs than  
Terminals

PC is the  
Manager's  
Terminal

Bi-Directional  
Data Transfer

Power of the  
Workstation  
Growing Quickly



INPUT

NOTES:

UP87: II-15

INPUT



## MAJOR ISSUE-CONNECTIVITY

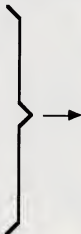
### TRENDS

PCs Commonly  
Connected

PC Interface  
as Standard

PC as Dept'l.  
System  
Workstations

LANs Evolving  
Slowly



INPUT

NOTES:

UP87: II-16

INPUT





## MAJOR ISSUE-CONNECTIVITY

### OBJECTIVES

Standards for  
Connectivity

→ Info Center  
in Charge

Programmable  
Workstation  
Preference

INPUT

NOTES:

UP87: II-17

INPUT



## MAJOR ISSUE-USER INVOLVEMENT

### ELEMENTS

Mgmt. is the User

Appetite for Data

Dept'l. Computers  
vs. PCs

Applications  
without Rules

Power User's  
Growing Influence



INPUT

NOTES:

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INPUT



## MAJOR ISSUE-USER INVOLVEMENT

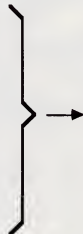
### TRENDS

More Power at  
the Workstation

Access to Data

Defining Own  
Environment

Developing Own  
Applications



INPUT

NOTES:

UP87: II-19

INPUT



## MAJOR ISSUE-USER INVOLVEMENT

### OBJECTIVES

Strengthen  
End-User Computing  
Function



Flexible Standards

Education about  
Application  
Development

Education about  
IS Strategy

INPUT

NOTES:

UP87: II-20

INPUT





## MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

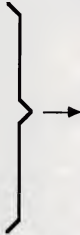
### ELEMENTS

Focus on Devel't.  
and Architecture

Infra-structure  
Changing Rapidly

Control over  
Development  
Changing

Impact on Installed  
Processes and  
Applications



INPUT

NOTES:

UP87: II-21

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## MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

### TRENDS

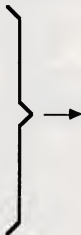
Addressing  
Entire Process

Many CASE Tools-  
No Proven Leader

4GLs Not the  
Long-Term Answer

Go Slow Attitude

Professional Services  
Co's. Leading the Way



INPUT

NOTES:

UP87: II-22

INPUT



## MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

### OBJECTIVES

Study CASE-Don't  
Jump Too Fast

→ User Involvement in  
Large Applications

Set Rules for User  
Applications

User Education on  
Planning for  
Computing

INPUT

NOTES:

UP87: II-23

INPUT



## MAJOR ISSUE- BUSINESS CONTRIBUTION

### ELEMENTS

Senior User  
Influence

Greater Return  
on Investment

Business  
Knowledge  
of Developers

Senior Mgmt.  
Expectations  
Growing



INPUT

NOTES:

UP87: II-24

INPUT





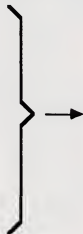
## MAJOR ISSUE- BUSINESS CONTRIBUTION

### TRENDS

IS Executive  
Stature Grows

Increased Business  
Justification

Use of Outside  
Development  
Firms



INPUT

NOTES:

UP87: II-25

INPUT



## MAJOR ISSUE- BUSINESS CONTRIBUTION

### OBJECTIVES

Assume Strategic Role

→ Expose Senior Mgmt.  
to Technology

Monitor Competition's  
IS Program

Proactively Consider  
Outside Experts

INPUT

NOTES:

UP87: II-26

INPUT



## INFORMATION SYSTEMS RECOMMENDED CHANGES OF EMPHASIS

1987-1992

Data Processing	—————▶	Information Flow
Information Quantity	—————▶	Information Quality
Automation of Process	—————▶	Improvement of Process

INPUT

NOTES:

UP87: II-27

INPUT



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IMPACTS OF NEW TECHNOLOGY

INPUT

NOTES:

UP87: III-1

INPUT





## TECHNOLOGICAL DEVELOPMENTS OPTIONS AND ISSUES

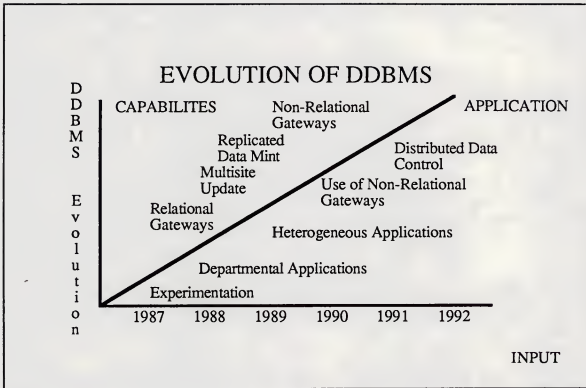
- Data Base-Relational and Distributed
- Workstations
- Networking
- Electronic Data Interchange
- Managing Technology

INPUT

NOTES:

UP87: III-2





NOTES:

UP87: III-3

INPUT



## DDBMS-CRITICAL SUCCESS FACTORS

1. Know Relational DBMS Technology
2. Audit the Data Administration Function
3. Do a Controlled Experiment
4. Use a Homogeneous DBMS Environment
5. Involve a Mature End User
6. Use a Geographically Dispersed Application
7. Select a Non-Strategic Application

INPUT

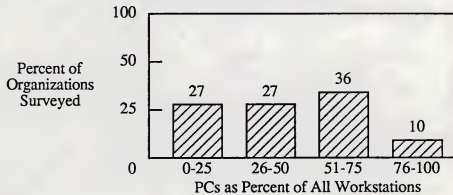
NOTES:

UP87: III-4

INPUT



**WORKSTATION TRENDS**  
**PERSONAL COMPUTERS AS A PERCENTAGE**  
**OF ALL WORKSTATIONS**



INPUT

NOTES:

UP87: III-5

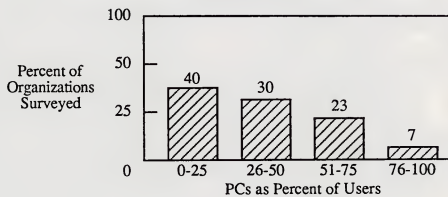
INPUT





## WORKSTATION TRENDS

### PERSONAL COMPUTERS AS A PERCENTAGE OF USERS



INPUT

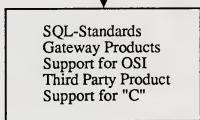
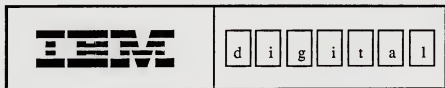
NOTES:

UP87: III-6

INPUT



## NETWORKING THE COMMON GROUND



INPUT

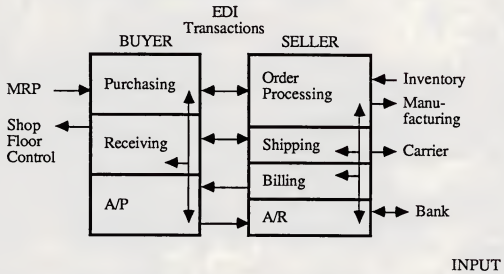
NOTES:

UP87: III-7

INPUT



## EDI APPLICATIONS



NOTES:

UP87: III-8

INPUT

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, accounts payable, and accounts receivable. It also outlines the procedures for recording these transactions, including the use of double-entry bookkeeping to ensure that the books balance.

The second part of the document focuses on the analysis of the recorded data. It explains how to calculate key financial ratios and metrics, such as the gross profit margin, net profit margin, and current ratio. These metrics are used to assess the company's financial health and performance. The document also discusses the importance of comparing these metrics to industry benchmarks and historical data to identify trends and areas for improvement.

The third part of the document covers the preparation of financial statements. It provides a step-by-step guide to creating the income statement, balance sheet, and cash flow statement. It also discusses the importance of auditing these statements to ensure their accuracy and reliability. The document concludes with a summary of the key points and a final note on the importance of regular financial review and reporting.

EDI  
"THE WAVE OF THE FUTURE"

- Applications
- Enhanced Services: E-mail, E-forms, Data Bases
- Internetworking
- Media (Data, Graphics, Voice, Video)

INPUT

NOTES:

UP87: III-9

INPUT





## IS MANAGEMENT FOCUS

AREA	NEED
TECHNOLOGY INTEGRATION	Infrastructure Data Management User Interfaces
MANAGEMENT OF IS	Productivity of IS Simplification of Support User-Managed Development
STRATEGIC AND ADVANCED SYSTEMS	

INPUT

NOTES:

UP87: III-10

INPUT



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NEW APPLICATION TRENDS  
AND  
DEVELOPMENT RESOURCE ALLOCATION

INPUT

NOTES:

UP87: IV-1

INPUT



## NEW APPLICATION TRENDS CROSS INDUSTRY SUMMARY

- Electronic Data Interchange
- Business Analysis and Management Tools
- Purchasing Package Software
- Strategic Applications
- RDBMS on the Minicomputer (MID) Level

INPUT

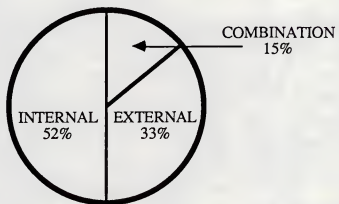
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SOURCE OF  
DEVELOPMENT RESOURCES  
GROUP ONE



INPUT

NOTES:

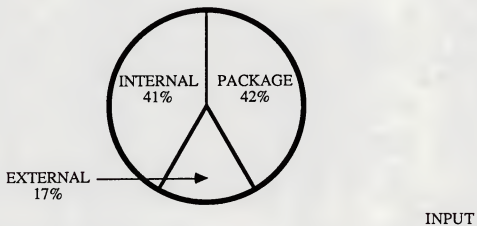
UP87: IV-3

INPUT





SOURCE OF  
DEVELOPMENT RESOURCES  
GROUP TWO



NOTES:

UP87: IV-4

INPUT



# ASSIGNMENT OF APPLICATIONS

## DEVELOPMENT STAFF



INPUT

NOTES:

UP87: IV-5

INPUT



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BUDGET ANALYSIS  
1987-1988

INPUT

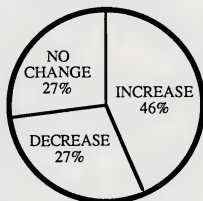
NOTES:

UP87: V-1

INPUT



BUDGET CHANGE FOR ALL  
INDUSTRIES



INPUT

NOTES:


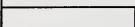

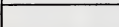
UP87: V-2

INPUT





## INDUSTRY COMPARISON

INDUSTRY SECTOR HIGH	PERCENT CHANGE			
	4	8	12	
Telecommunications				12.0
Services				10.8
Transportation				10.3
Other				10.0

INPUT

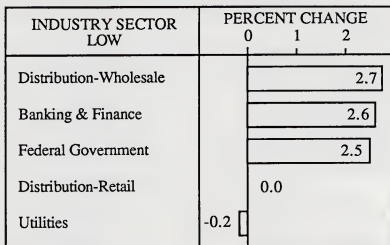
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## INDUSTRY COMPARISON



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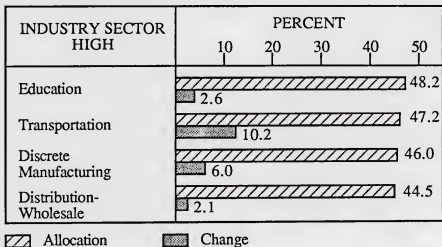
NOTES:

UP87: V-4

INPUT



## PERSONNEL EXPENDITURES



INPUT

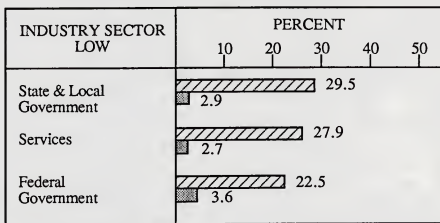
NOTES:

UP87: V-5

INPUT



## PERSONNEL EXPENDITURES



Allocation

Change

INPUT

NOTES:

UP87: V-6

INPUT





## PERSONNEL EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	34.1	15.3
Smallest Change Distribution-Retail	41.8	1.1

INPUT

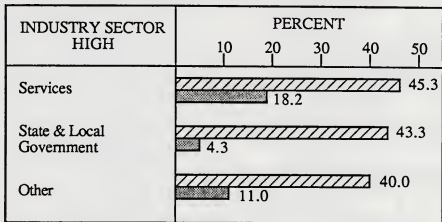
NOTES:

UP87: V-7

INPUT



## HARDWARE EXPENDITURES



Allocation

Change

INPUT

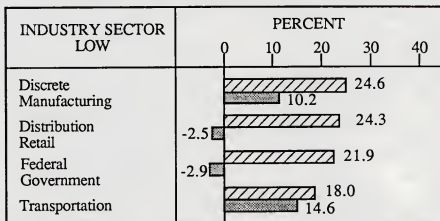
NOTES:

UP87: V-8

INPUT



## HARDWARE EXPENDITURES



Allocation
  Change

INPUT

NOTES:

UP87: V-9

INPUT



## HARDWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Services	45.3	18.2
Smallest Change Federal Government	21.9	-2.9

INPUT

NOTES:

UP87: V-10

INPUT





## HARDWARE EXPENDITURES

PERCENT CHANGE  
MAINFRAME-MINI-MICRO

INDUSTRY SECTOR	MAIN	MINI	MICRO	MASS	OTHER	TOTAL
Services	18.8	0.0	18.8	0.0	17.8	18.2
Transport.	16.4	8.5	7.1	0.0	0.0	14.6
Discr. Mfg.	10.9	6.2	15.1	8.0	3.5	10.2

INPUT

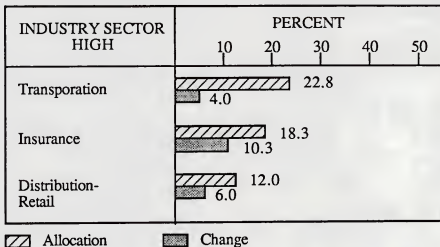
NOTES:

UP87: V-11

INPUT



## DATA COMMUNICATIONS EXPENDITURES



INPUT

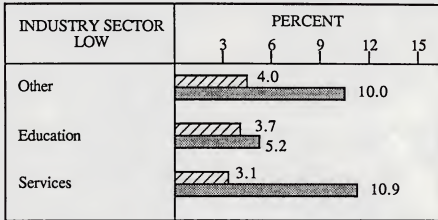
NOTES:

UP87: V-12

INPUT



## DATA COMMUNICATIONS EXPENDITURES



Allocation

Change

INPUT

NOTES:

UP87: V-13

INPUT



## DATA COMMUNICATIONS EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	18.3	10.3
Smallest Change Telecommunications	5.3	-12.0

INPUT

NOTES:

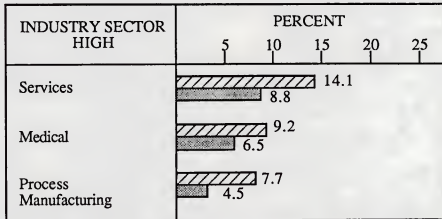
UP87: V-14

INPUT





## EXTERNAL SOFTWARE EXPENDITURES



Allocation
  Change

INPUT

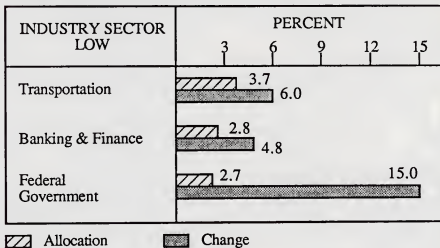
NOTES:

UP87: V-15

INPUT



## EXTERNAL SOFTWARE EXPENDITURES



INPUT

NOTES:

UP87: V-16

INPUT



## EXTERNAL SOFTWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Telecommunications	7.2	19.0
Smallest Change Distribution-Retail	6.1	-1.4

INPUT

NOTES:

UP87: V-17

INPUT



# INFORMATION SYSTEMS PROGRAM ANNUAL REPORT

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1988 PLAN

INPUT

NOTES:

UP87:VI-1





## INFORMATION SYSTEMS PROGRAM FOCUS

- Advising IS on Planning for the Future by
  - Assessing & Interpreting the Management Aspects of Key Technology Trends
  - Understanding & Setting Objectives on Critical Issues
  - Analysing the Application Development & Spending Trends

INPUT

NOTES:

UP87:VI-2



## INFORMATION SYSTEMS PROGRAM 1988 OBJECTIVES

- Provide Year to Year Program Continuity
- Increase Client Contact
- Increase Vendor Input to Research
- Focus on the Large IS Organization
- Provide Planning & Management Guidance -  
Not Technology Analysis

INPUT

NOTES:

UP87:VI-3



## INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

2 SEMINARS	3 REPORTS	2 REPORT SERIES
March June	DBMS CASE Annual	Workstation Strategies DEC vs. IBM

INPUT

NOTES:

UP87:VI-4



## INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Seminars
  - One Day
  - Current Research
  - Other Program Research
  - Outside Speaker

INPUT

NOTES:

UP87:VI-5





## INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Reports
  - DBMS      Focus on Relational DBMS & Data Management Process
  - CASE      State of the Technology & its Application
  - Annual     Larger Interview Sample & First Half Publication

INPUT

NOTES:

UP87:VI-6



## INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Report Series
  - Objective                      Continuity of Information & Increased Depth
  - Workstation Strategies      Completion of 1987 Assessment - Vendor Views
  - DEC/IBM                        Closer Look at Key Issues

INPUT

NOTES:

UP87:VI-7



## INFORMATION SYSTEMS PROGRAM 1988 PROGRAM

- Client Support
  - Hotline
  - Quarterly Vendor Watch
  - Annual Client Conference
  - Annual Onsite Presentation  
(Oct/Nov)

INPUT

NOTES:

UP87:VI-8

