# DATACOPY

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PAGINATION SHEET

Job Description _Input w/o # 35184_

Special Instructions _60#_
_Turner Presentation_

**FRONT    BACK**                    PAGE ___/___ OF _____

(67# Grey paper)

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|---|---|
| Comm Tends Large Federal agencies | |
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(60# White paper)

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**INPUT®**

# CONNECTIVITY TRENDS IN LARGE FEDERAL AGENCIES

John E. Turner
Director of Information Systems and
Telecommunications
U.S. Department of Transportation

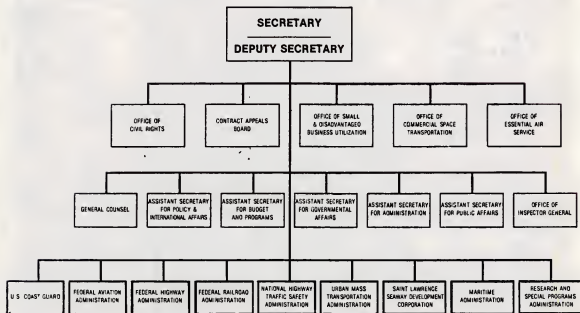- WHERE WE ARE NOW

- WHAT ARE OUR PROBLEMS

- WHERE ARE WE GOING

- HOW ARE WE TO GET THERE

- WHAT ARE OUR ASSUMPTIONS

# U.S. DEPARTMENT OF TRANSPORTATION

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                        ┌─────────────────────┐
                        │      SECRETARY      │
                        ├─────────────────────┤
                        │   DEPUTY SECRETARY  │
                        └─────────────────────┘
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| OFFICE OF CIVIL RIGHTS | CONTRACT APPEALS BOARD | OFFICE OF SMALL & DISADVANTAGED BUSINESS UTILIZATION | OFFICE OF COMMERCIAL SPACE TRANSPORTATION | OFFICE OF ESSENTIAL AIR SERVICE |

| GENERAL COUNSEL | ASSISTANT SECRETARY FOR POLICY & INTERNATIONAL AFFAIRS | ASSISTANT SECRETARY FOR BUDGET AND PROGRAMS | ASSISTANT SECRETARY FOR GOVERNMENTAL AFFAIRS | ASSISTANT SECRETARY FOR ADMINISTRATION | ASSISTANT SECRETARY FOR PUBLIC AFFAIRS | OFFICE OF INSPECTOR GENERAL |

| U.S. COAST GUARD | FEDERAL AVIATION ADMINISTRATION | FEDERAL HIGHWAY ADMINISTRATION | FEDERAL RAILROAD ADMINISTRATION | NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION | URBAN MASS TRANSPORTATION ADMINISTRATION | SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION | MARITIME ADMINISTRATION | RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION |

# IRM STATUS

- OPERATIONS VS ADMINISTRATION

  COAST GUARD
  FAA

- LARGE TELECOMMUNICATION BUDGETS

  DEDICATED NETWORKS
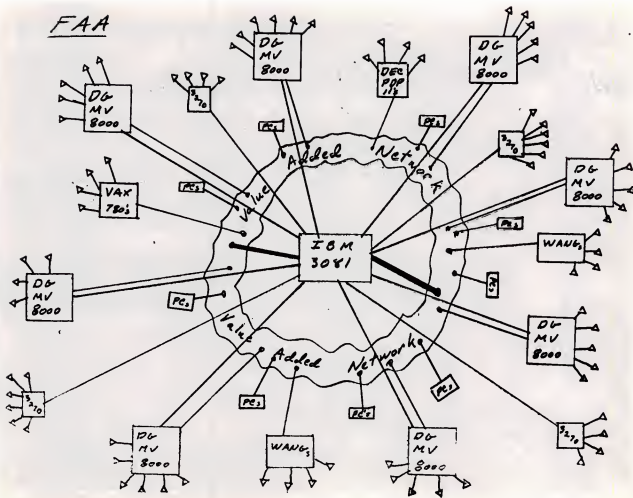  VALUE ADDED NETWORKS
  FTS DIALUP

- WIDE RANGE OF COMPUTERS

  MANY VENDORS
  MANY SIZES
  MANY AGES

- LIMITED DOT TECHNICAL CAPABILITY

  INCREASED CONTRACTOR SUPPORT

## COMMUNICATIONS

- DOT WIDE – DATA TRANSFER WITH COMMON PROTOCOLS

- EACH OPERATING ADMINISTRATION

  INFORMATION TRANSFER
  DOCUMENT TRANSFER

INFORMATION NEEDS

DOT WIDE - COMOMON INFORMATION SYSTEM
         - USED BY ALL
         - PAYROLL/PERSONNEL/ACCOUNTING/PROCUREMENT, etc.
         - CENTRALIZED/HOST PROCESSING

EACH OPERATING ADMINISTRATION

- UNIQUE REQUIREMENTS/FUNCTIONS

PRESENT TO FUTURE ACTIVITIES

- DOT VALUE ADDED NETWORK

  - WHERE APPLICABLE UTILIZE GOVERNMENT-OWNED
    FACILITIES (FAA MICROWAVE)

- MULTI-YEAR REQUIREMENT CONTRACTS FOR OPERATNG
  ADMINISTRATION WORKSTATION NEEDS

- MULTI-YEAR REQUIREMENT CONTRACTS FOR OPERATING
  ADMINISTRATION "DEPARTMENTAL" COMPUTING NEEDS

- REFINEMENT OF HOST MAIN FRAME COMPUTER ACTIVITY (HQS, OKC)

ASSUMPTIONS

- VENDORS WILL CONTINUE TO MOVE CLOSER ON DOCUMENT
  INTERCHANGE STANDARDS

- IBM COMPATIBILITY WILL CONTINUE TO BE THE HOST
  SOLUTION

- VALUE ADDED COMMUNICATIONS PROVIDES SECURITY,
  FLEXIBILITY, COST EFFECTIVENESS

- COMPANIES LIKE SOFTWARE SWITCH CONTINUE TO PROVIDE
  SOLUTIONS IN A MULTI-VENDOR ENVIRONMENT

## FINAL WORD

- NO SIMPLE SOLUTION/NO SINGLE SOLUTION

- PLANNING IS THE KEY

- COST EFFECTIVENESS IS A MUST

- BENEFITS OF AUTOMATION MUST BE SOLD (AND DOCUMENTED)

- COMMUNICATION IS CRITICAL FOR THE FUTURE.  FLEXIBILITY
  IS A MUST

  - HOST TO HOST
  - DISTRIBUTED
  - CENTRALIZED

- COMMUNICATION PROVIDES THE MEANS OF SATISFYING
  DIVERSE NEEDS

**John E. Turner**

Mr. Turner is the Director of Information Systems and Telecommunications for the U.S. Department of Transportation. He is responsible for the information resource management policy and direction for the Department. Under the direction of the Single Official, he implements the functions specified by the Paperwork Reduction Act of 1980 including planning, budgeting, organizing, directing, promoting, controlling, and otherwise managing the collection, use, and dissemination of information. This includes automatic data processing, telecommunications, information collection burden on the public, and other paperwork management activities. He is also responsible for the operation of the Transportation Computer Center.

Mr. Turner holds a B.A. degree from Washington State University and an MBA in Management from Oklahoma City University. Prior to his present position, Mr. Turner was Manager of the FAA Data Services Division in Oklahoma City. He has a 22-year background in information systems, including 6 years as a Communications Officer in the Air Force performing computer communication analyst/programming activities.
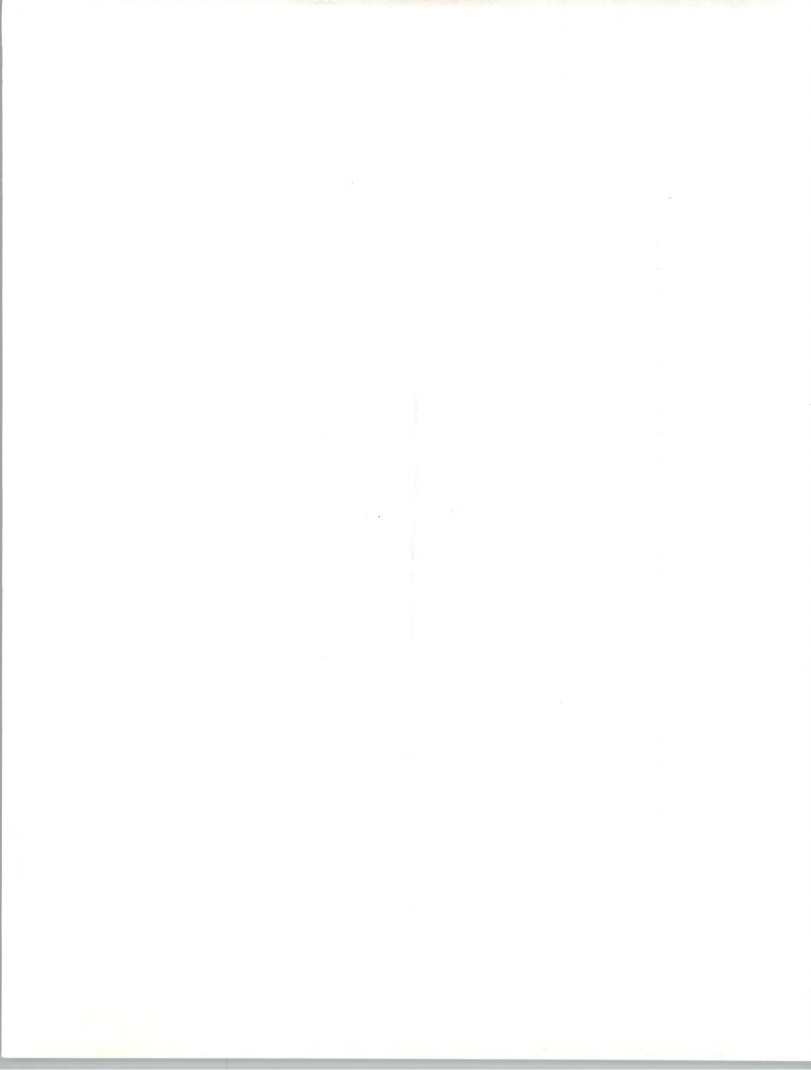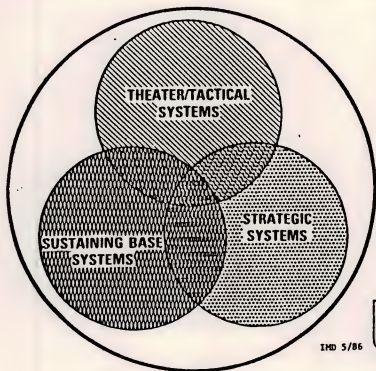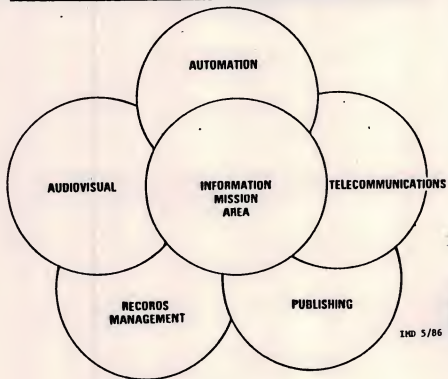
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# INFORMATION MISSION AREA



AUTOMATION

AUDIOVISUAL

INFORMATION
MISSION
AREA

TELECOMMUNICATIONS

RECORDS
MANAGEMENT

PUBLISHING

IMD 5/86

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# PROCESSING CAPABILITIES

**BASOPS**

Ft. Carson

Ft. Hood

Ft. Sill

Ft. Lewis

Ft. Huachuca

**VIABLE**

RDC

Ft. Carson

Ft. Hood

Ft. Sill

Ft. Lewis

Ft. Huachuca

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# PROCESSING CAPABILITIES

VIABLE          Transition          STARNET

Tier 1

Tier 2

Dumb
Terminal        Tier 3          Smart
Terminal
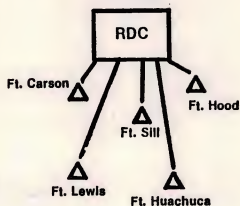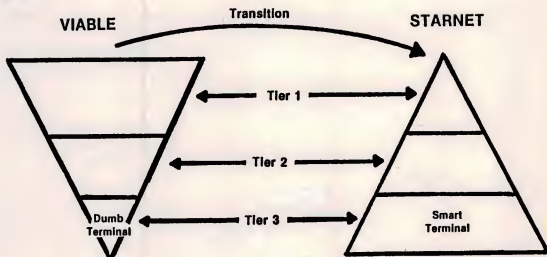
# RELATED CHALLENGES

**Corporate data base**
**Data element standards**
**Data design structure**
**Optimization data model**
**Standard operating systems**
**Development tools**
**Controls**

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# BASIC FUNCTIONS

**Structure**
**Man**
**Train**
**Equip**
**Finance**
**Move**
**Support**
**Command**

# ASSUMPTIONS

Standard DBMS

  Standard OS

    ADA and 4th Generation Language

      PA Functional Data Admin

        DA Priority

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# COMMAND

| SYSTEM | INTERFACE | |
| | ISEC STAMMIS | OTHER |
| --- | --- | --- |
| 1. Combat System Support Control System (CSSCS) | SARSS 2A/2B/3 | MCS |
| | SAMS I, II | I/EW |
| | DAMMS-R | AFATDS |
| | SAAS-4 | SHORADC2 |
| | SIDPERS III | TAMMIS |
| | SPBS-R | |
| | ULLS | |

Comments: System to be developed from the beginning
using Ada and 4th Generation Languages.

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# Ada in ISEC: Implementation Approach

Implement Ada programming language through ——

1. Acquiring — Software support capabilities
2. Evolving — Ada based software engineering
3. Training — Managers, analysts and programmers
4. Projecting — Across—the—board evolution by 1995
5. Formulating — Metrics for productivity, quality and
   cost control
6. Undertaking — Pilot software development projects

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# Ada in ISEC:  Strategic Concepts

☐  Ada is a software technology —— not just a new programming language

☐  Ada propels the STAMMIS Modernization Program

☐  Ada disciplines Information Systems life—cycle support, but is _not_ a panacea

☐  Keys to realizing Ada's tremendous potential :

  —  Improve the human resource

  —  Improve the availability and use of software tools

## Foundation Project: Software Engineering Support Environment

o Define Software Engineering methods for Information Systems lifecycle support (SofTech, Inc.)

o Provide support environment architecture and implementation (Teledyne Brown Engineering)

# Foundation Project: APSE Evaluation Methods

o **Army WWMCCS Information System (AWIS) initiative**

o **Provides quantifiable, generic criteria for evaluating commercial APSEs**

o **Criteria to be applied to existing APSEs**

o **Software Engineering Institute (SEI) is contractor**

# Foundation Project: Ada Interface with Commercial DBMS

o Extend WWMCCS Information System (WIS) Ada/SQL

o Develop procedures and examples keyed to Army Information System requirements

o Procedures targeted to DATACOM/DB

o Massachusetts Computer Associates (ADR subsidiary) is contractor

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# Foundation Project: Reusable Ada Packages for Information Systems Development (RAPID)

o Define generic Information System architecture

o Design reusable software components

o Develop procedures for managing repository of reusable components

o Proof of concept in combat service support functional systems

o SofTech, Inc. is contractor

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"There is nothing more difficult to plan,
More uncertain of success,
Nor more dangerous to manage,
Than creation of a new order of things."

Machiavelli