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STUDY PROJECT

INFORMATION OVERLOAD--
THE ARMY'S FAILURE TO MANAGE A RESOURCE

BY

RICHARD D. WHITSETT
COLONEL, ARMOR

AD A129989

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US ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013

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    Information is a valuable resource of Headquarters, Department of the Army (HQDA). This fact is evidenced by HQDA's extensive reporting requirements levied on the field, its many complex management information systems, and its large investment in data processing equipment, software, and personnel. In fact, the primary function of HQDA, as the major planning and resource management activity of the Army, is centered about the acquisition, distribution, processing, storage, use, and dissemination of information. The

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functional HQDA activities of program planning, operational decisionmaking, resource allocation and budgeting, tracking and control of resource utilization, reporting to OSD, JCS, Congress and other federal agencies, and monitoring and coordinating Army field activities all rely on accurate, timely, consistent and understandable information. HQDA is, truly, an information-based agency; and yet, it has not effectively managed its information in support of the total Department of the Army mission.

This paper explores the Army's attempts to manage its information systems as a valuable resource; provides a historical perspective on the subject; examines the Army's present information management systems; and, supplies some insight on the future of information resource management in the Army. The paper concludes that in the past three decades the Army's top management has not been sincerely committed to the development of an Information Resource Management program.

USAWC MILITARY STUDIES PROGRAM

INFORMATION OVERLOAD--
THE ARMY'S FAILURE TO MANAGE A RESOURCE

INDIVIDUAL STUDY PROJECT

by

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CHAPTER I

INTRODUCTION

STATEMENT OF THE PROBLEM

Reports and information proliferate throughout the Army at all command and management levels. The primary reason for this phenomenon is that over the years Department of the Army has failed to properly manage information as a valuable resource.

BACKGROUND

Regardless of the echelon, command and management decision making is based almost solely on information available. Presently at the installation, major command and Department of the Army levels data is collected, stored, computed and formatted in several major functional systems managed by several functional proponent managers. There is no means currently available to provide commonly needed information to other than the principal functional user. In short, there is no singular data/information manager to inventory, collect, integrate and distribute information to users. Functional proponents are individually capitalizing on the rapidly changing technology and this is causing data collection and information use to become even more functionally oriented and duplicative.

In its most general sense the concept of a "management information system," which describes the cybernetic exchange of information between decision makers and operators to keep an organization on course toward its objectives, is deceptively straightforward. The processing (collection,

manipulation, storage, retrieval and transmission) of data which form the substance of the management information flow, however, has been profoundly affected by the introduction of the electronic computer. Once part of the system, the computer provides new dimensions to the manager's capacity for performing the classical functions of planning, organizing, directing and controlling. It also provides the manager with a new set of problems concerning the economical and efficient use of the costly, complex, information technology assets which he soon finds indispensable.

The Army installed its first computers for processing management information in 1956. Since this was less than twenty-six years ago it might be assumed that these ventures, one in signal supply and one in personal accounting, would have been able to draw on the prior experience and expertise of civilian business and industry. However, the sparse history of the application of computers to information processing at the time can be adequately described in just a few entries of significant dates:

-- 1951 The US Census Bureau purchased a UNIVAC I. This was the first sale of an electronic computer for processing business-type information.

-- 1953 The International Business Machines Corporation entered the computer market.

-- 1954 General Electric Corporation became the first business concern to install a computer for management information purposes.

By 1953 the three military departments had formed plans for applications of the new computer technology to their management problems. In the Army's case these plans were prompted by a need for greater speed and capacity in handling the large volumes of data in logistics, personnel and finance applications in which punch card machines had been used to meet the needs of World War II and the subsequent demobilization. These early years

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of computer-based Management Information Systems (MIS) were halting and unsure in the Army. The controls which were established were tenuous at best, concentrating on the observable and the immediate problems of hardware installation. The next few years would bring popularity, widespread acceptance and the awkward problems of rapid growth. This laissez-faire approach to management of ADP resources was reflected in Army Regulation 1-251, Army Data Processing System Program, published in 1960. It left to each functional proponent the responsibility for "developing appropriate plans, programs and policies within their respective areas of interest." Responsibility for army-wide supervision and control was diffused within the Army Staff. Any coordination on information system development was also piecemeal and only as a result of chance coincidence of inter-agency interests. Very little has changed over the past two decades. A review of Army Regulation 18-1, Army Automation Management, dated August 1980 proposes permitting "management flexibility by major Army commands and Army Staff agencies" by stressing "decentralization as a management concept for automation." Similarly, practically no progress has been accomplished by the Army in the management of information.

STUDY OBJECTIVES

It is the goal of this study to provide a cursory overview of the Army's attempts to manage information. Specific objectives of this study are:

-- To gain a historical perspective on the management of information within the Army.

-- To examine the Army's present information management system.

-- To provide insight on the direction the Army is taking for the future in the area of information resource management.

-- To draw conclusions and provide recommendations based on an analysis of the above objectives on the Army's program to manage information as a resource.

STUDY METHODOLOGY

The data for the study was gathered from several sources. The majority of the information came from individual research of reports, informa tion papers, staff actions, Army Regulations, Technical Bulletins, stud and briefings which were available at Headquarters, Department of the A) Forces Command and Fort Campbell, Kentucky. In addition, numerous tele conversations and individual interviews with action officers/staff division chiefs of MACOMs and HQDA were conducted by the author. Also correspondence requesting input and data was sent to four like type CONUS units.

-- 1st Infantry Division (Mechanized)

-- 4th Infantry Division (Mechanized)

-- 5th Infantry Division (Mechanized)

-- 24th Infantry Division (Mechanized)

These units were chosen because the commander of each is both an installation commander and the commander of a division under the command of FORSCOM. This input provided some basis for commonality or differential of information management at that level.

SCOPE OF THE STUDY

As an individual effort the scope of the study had, by necessity, to be limited to a manageable project. The original thrust of the study was

to be a MICRO assessment of reports in the Army. However, in the prelim-

inary stages of research it became apparent that reports were just the "tip

of the iceberg" and a MACRO evaluation of the Army's information management

system and program would be necessary. Any attempt to analytically go

below the division/installation level was just beyond the capability of

this study. Thus, the study is limited in scope to information management

at MACOM and Headquarters, Department of the Army levels. The study was

further confined by a curtailment in travel resources. This in turn lim-

ited research and focused the study on Headquarters, Department of the Army

and Headquarters, FORSCOM with the majority of effort directed at HQDA as

the Army's management and policymaking institution.

Some of the information and data used in the study is the opinion of

individual staff officers and middle managers of the three levels of Army

management-installation, major command and HQDA. Therefore, segments of

the information used in the study are not quantifiable but do provide a

variety of diverse views which are germane to the study. It is highly

important that the reader of the study keep this in mind at all times. It

is not the purpose of the study to single out specific organizations,

individuals, or systems for criticism but rather to concentrate on informa-

tion management practices found to be common across Headquarters, Depart-

ment of the Army.

CHAPTER II

REPORTS

AN OVERVIEW

Reports are an intrinsic and necessary part of any large and complex organization and assist in providing the accurate, up to date information on which managment sets organizational goals, makes decisions, allocates resources and accomplishes the myriad of other tasks required to manage a dynamic enterprise.

The Army, of course, is no different. Reports in the Army are big business that cost money and use vast amounts of resources in order to provide information to top decision makers. Although no current data is available from Department of the Army on the total cost, a 1981 FORSCOM study does provide some insight on the resources utilized to satisfy reporting requirements. Major points in the study were:

-- The average annual cost of each report required of FORSCOM activities in 1977 was $53,250. That cost today is approximately $71,500-- a 34 percent increase.

-- At the end of 1980 a total of 472 reports were imposed by Department of the Army on FORSCOM at a total cost of almost $25.8 million and a manpower effort of 2 1/2 million manhours.

-- Approximately 60 percent of the $25.8 million was the result of eleven "high-cost" reports. (Appendix 1)

-- FORSCOM initiated 51 reports at a total cost of over $4 million and about 340,000 manhours annually.

-- At any one time approximately 4 percent of FORSCOMs workforce was involved in some way with a report.

The Forces Command study did not include exempt reports, as required reports inactive for 12 to 24 months, and operational computer systems costs. So at best the FORSCOM analysis c reporting requirements costs must be considered underestimated by a very substantial figure. Keeping in mind that the above study outlines costs of reports in only one major command of the Army, the implications become astonishing when spread out over 13 other MACOMs and 19 DA agencies not including the Secretary of the Army and the Chief of Staff of the Army.

Table 1

DA AND HIGHER HEADQUARTERS REPORTS IMPOSED ON FORSCOM
1980

Staff Proponent	Total Cost	Total Manhours	Total Reports
DCSPER	$5,709.1	472.5	112
DCSOPS	$2,777.7	278.7	43
DCSLOG	$2,336.4	268.0	108
COA	$8,375.0	780.7	101
OCE	$3,743.2	322.0	62
TAG	$2,412.0	333.7	27
Others	$ 451.0	29.4	70

Updated data not available
Cost and manpower in (000)
Total reports includes reports monitored

A review of the current Army Regulation 335-11, dated November 1982, which lists the total recurring reports requirements for Headquarters, Department of the Army, provides the following information. Of the 1,112 reports listed 543 are initiated by agencies internal to HQDA and 569 are initiated by other federal or defense agencies. (Again, these reporting requirements do not include exempt reports which will be discussed later in the study). Of the 19 agencies within HQDA initiating these reports only 5

are responsible for 49 percent of the internal recurring requirements and for monitoring 55 percent of all external recurring reports.

Table 2

HQDA RECURRING REPORTS

Agency	Reports Initiated	External Reports Monitored
Comptroller	40	67
DCSPER	77	90
DCSOPS	40	38
DCSLOG	83	48
COE	24	70
All Others	279	256

Data from AR 335-11 dated November 1982

The above reporting totals do not include 121 recurring reports initiated by Army major commands on other DA major commands and agencies. All of these reports to include external requirements impact at the primary management echelons of the Army. Each level must in turn expand resources and manpower to meet required reporting demands of the next higher level of management.

Table 3

HEADQUARTERS FORSCOM
REPORTS REQUIREMENTS

Primary Agency	Reports Prepared or Monitored	%
Comptroller	109	19
DCSPER	105	18
DCSOPS	53	9
DCSLOG	111	19
COE	61	11
All Others	138	24

Data from FORSCOM study

Table 4

FORSCOM INSTALLATIONS

Installation	Higher Headquarters Reports	Locally Initiated Reports
1	393	6
2	390	13

Data from selected installations

EXTERNAL REPORT REQUIREMENTS

As mentioned earlier over 50 percent of the controlled report require-
ments are requests for information placed on HQDA by organizations or
individuals outside of the US Army (Annex B). These include statutory
requirements of Congress, the Office of Management and Budget, and the US
Treasury as well as regulatory requirements received from Department of
Defense and other military services. The satisfaction of these report
requirements consumes a considerable amount of Army resources and creates
many processing requirements for Army information systems to fill. While
the primary purpose of HQDA is to support and direct the Army, it cannot
afford to ignore or be non-responsive to requests from resource appropri-
ators. A major form of support which HQDA provides the Army is the identi-
fication and defense of program resource requirements to OSD and Congress.

Statutory information demands are required to support public laws and
other legislated affairs. The Army must not only report to the Congress on
the way it plans to conduct its business (the Army Budget) but also support
and define its objectives and conduct to the appropriate committees. For
example, the Office of Management and Budget (OMB) possesses statutory
powers in its requirement that each Federal agency must follow certain
guidelines in preparing its annual budget. The Army must justify specific

proposals to OMB and is required to defend to OMB its submission to the overall United States Budget. Another example is the reporting requirements to the United States Treasury which involves the monthly reporting of all appropriated funds disbursement and expenditures. This information requirement is transmitted from the United States Army Finance and Accounting Center to the United States Treasury.

Meeting the statutory external information requirements described above involve both manual and automated reporting processes. In the case of the financial information and the processes connected with justifying the budget estimate to Congress and OMB, there are set procedures for summarizing and compiling the information. The major problem in the financial and budget areas lies in being able to be responsive to additional requests for information which are not normally connected with the budgetary cycle. These requests for justification often involve manual searches for information involving committee meetings, and telephone conversations to coordinate the information.

The second type of external information requirements are regulatory and primarily involve the interrelationship of the Army with other branches of the service and DOD. Again, the requirements are supported by both automated and manual reporting processes and involve a variety of information to include Financial, Command and Control, Research and Development, Logistics, and Personnel categories. Examples of information reporting problems in satisfying regulatory information requirements at HQDA include the following:

        -- Lack of common data standards, conventions and definitions.

        -- Lack of common formats.

        -- Misunderstanding of information requirements.

        -- Nonexistant specific data in automated systems.

The information used to respond to external requirements and to support army decision makers at the highest levels involves two primary categories: actions and studies. Staff actions, which constitute a major portion of staff activity at HQDA, are information requests on a wide variety of subjects that are coordinated and answered by an individual or an agency using, to a large degree, information gained from recurring reports. The role of the action officer in satisfying a staff action will be discussed later in the study.

Recently, HQDA has been cataloging staff actions in an automated system (OPTIMIS); however, because of action uniqueness and current limitations of the system, information searches are still made manually to a great extent.

The second category of satisfying information requirements is studies. HQDA conducts numerous staff studies on a wide variety of subjects. Some of these activities involve the formulation of a study group or committee and the appointment of an action officer, usually a member of top management. Studies and actions are both interrelated and use the same information gathering procedures and sources.

Not all of the report requirements from Federal and DOD agencies require input from management levels below HQDA. However, extensive effort by DA is expanded to insure these conduits of information remain open.

REPORTS CONTROL PROGRAM

Up to this point the study has dwelled on the number of reports which abound throughout the Army. However, a program for controlling reports has been established at Department of the Army level under the auspices of the

Adjutant General (TAG), who provides policy guidance and prescribes respon-

sibilities for the management and control of army management data collec-

tion requests (reports).

In November 1979, President Carter issued Executive Order 12174,

"Paperwork," which established procedures that were to aid in the elimina-

tion of all paperwork burdens on the public above the minimum necessary to

determine and implement public policy and ensure compliance with Federal

laws. Congress picking up this lead, enacted Public Law 96-511, "The Paper-

work Reduction Act of 1980," requiring all Federal agencies (including

military departments) to,

> systematically inventory its major information systems and peri-
> odically review management activities including planning, bud-
> geting, . . . controlling, and other administrative activities
> including the collection, use and dissemination of information.

This act gave renewed impetus to controlling reports in the Army, and AR

335-15, Management Information Control System, dated December 1982, is the

revised implementing directive. The regulation prescribes responsibili-

ties, policies and procedures for the Army-wide implementation of a Manage-

ment Information Control System with emphasis on the control of reports.

The information control program as delineated by AR 335-15 basically

outlines a centralized management procedure. In short, heads of HQDA

agencies, MACOMs and installations must appoint a Management Information

Control Officer (MICO) who is responsible for managing and supervising the

program within his jurisdiction.

Objectives of the program are to insure that:

-- Only mission essential management data are requested.

-- Directives that require management data are complete, clear,

brief, and comply with standard forms, terms, data elements and source

records.

-- Provide simple, orderly, and flexible procedures and systems
that can respond to emergencies.

-- Advanced information technology is used when cost effective.

At Headquarters, Department of the Army, each agency assigns a MICO who
is responsible to insure each new request for a report receives proper
staffing. Final approving authority is the Management Information Control
Division, Headquarters Administrative Systems Directorate, TAGO. Most
MACOMs mirror HQDA for assignment of MICOs but the MIC Office has been
located in the Management Division, Comptroller which is responsible for
the supervision and administration of the overall information control
program. The majority of MACOMs have directed that a centralized installa-
tion management information control office be established and a MICO
appointed to administer the system. Again, most MIC offices have been
located in the Management Division of the installation Comptroller. A few
posts have the program under the local Adjutant General.

Basically, the Army's Management Information Control System is a proce-
dure which requires each new request for recurring information (a report)
from a higher, lower or adjacent headquarters to be fully justified as to
need, cost and benefit. Once approved the recurring requirement must be
rejustified every three years by the agency/staff section requiring the
information. Figures 1 and 2 outline the process utilized for initial
approval and periodic justification.

Some management information documents are exempt from the reports
control process. Normally these are requirements used in day to day admin-
istrative activities such as request for assignment orders, travel authori-
zations, shipping instructions or other financial, procurement, transportation
and personnel documents.

Figure 1

APPROVAL OF NEW DATA REQUIREMENTS

```
┌─────────────────┐          ┌──────────────────┐          ┌──────────────────┐
│ Data Requirement│          │ Request with     │          │ Agency MICO      │
│ Developed by    │          │ justification    │          │ validates staffing│
│ Proponent       │          │ using DA Form    │──────────▶│ by Agency and    │
│ Action Officer  │          │ 335--submitted   │          │ presents full    │
│                 │          │ by proponent to  │          │ request package  │
└────────┬────────┘          │ Staff Agercy MICO│          │ to HQ MICO       │
         │                   └──────────────────┘          └──────────────────┘
         ▼                            ▲
     ╱───────────╲                    │
    ╱ Is requirement╲                 │
   ╱  exempt from    ╲────────────────┘
   ╲  control by     ╱
    ╲ HQ MICO?      ╱
     ╲───────────╱
         │
         ▼
              ┌──────────────────┐
              │ Exemption # in   │
              │ AR 335-15 cited  │
              │ in all directives│
              └──────────────────┘
```

```
┌────────────────────────────┐          ┌──────────────────────────┐
│ HQ MICO:                   │          │ Publishes approved       │
│ o Checks for redundancy    │          │ recurring requirements   │
│   of data (ARCS/FILES)     │          │ in appropriate regu-     │
│ o Validates costs          │          │ lation and maintains     │
│ o Discusses benefits       │─────────▶│ records of all approved  │
│   with proponent           │          │ requirements to include  │
│ o Simplifies request in    │          │ one-time requests        │
│   all possible ways        │          └──────────────────────────┘
│ o Examines directives      │
│   for clarity              │
│ o Approves or disapproves  │
│   request and if approved  │
│   assigns RCS              │
└────────────────────────────┘
```

Figure 2

HQDA
REVIEW OF RECURRING DATA REQUIREMENTS

| Data base of recurring requirements approved by HQDA, OSD and other Federal Agencies. | → | Schedule prepared for data requests based on functional categories in data base. | → | Approximately one-half of RCS bearing data requests sent to MACOMs for review annually by data respondents. |

MACOM selects samples of respondents to review for:
  o Cost
  o redundancy
  o burden
  o apparent benefit

→

MACOM consolidates results of reviews and submits to HQDA MICO.

→

HQDA MICO staffs review with proponents or monitoring offices of higher HQ requirements and requires proponent response to field comments

In addition to those cases having field comments all additional recurring data requests are periodically checked with proponent to determine need and to attempt simplification.

Reports review mandatory every three years.

To require an exemption in each case would interfere with the daily
operations of the Army; therefore, in actual operation at HQDA, only manage-
ment information requirements whose exemption status is doubtful are
referred to the HQDA MICO for determination. Further, any other informa-
tion requirement not specifically identified in AR 335-15 but determined by
the MICO to conform to the intent of the exempt categories may be exempted.
Thus, HQDA exemptions are principally granted for:

      -- Evaluation/updating of existing plans, missions and courses of
actions.

      -- Requirement documents for R and D and production of material
systems.

      -- GAO, AAA and IG surveys.

      -- Operational documents which are part of the routine procedure.
Approximately 90-100 exemptions are granted annually by the HQDA MICO, and
Agency MICOs grant additional exemptions per Chapter 5, AR 335-15. How-
ever, some MICOs in the field insist that the exemption section of the AR
is an open invitation to elude the system.
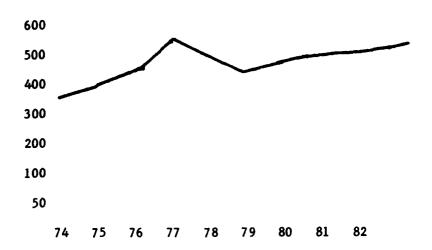
Over the years has the Army's reports control system worked? No study
or analysis of the subject is available from an army-wide perspective;
however, a case study of one major command may provide some evidence of its
effectiveness.

In 1977 FORSCOM made a major effort to seek relief from the rapidly
accelerating report requirements of Headquarters, Department of the Army.
Since 1974 the number of reports initiated by HQDA had been on a steady
increase; however, in 1976 report requirements picked up impetus and soared
approximately 55 reports in the one year period peaking at 505 total infor-
mation requirements. The Commanding General, Forces Command expressed his

concern over the situation to the Army Chief of Staff and identified 75 reports that were considered candidates for elimination, reduction in frequency or deduction in content.

Table 5

REPORTS INITIATED BY DA AND HIGHER AUTHORITY
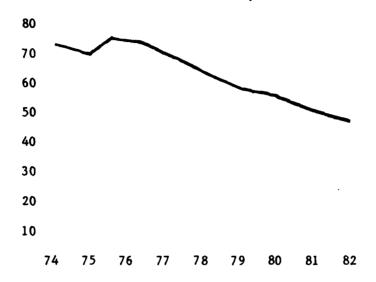
As the table above reflects, the trend was reversed and continued its downward orientation through 1979 when the requirements started to again increase at a uniform pace reaching 500 reports in January 1983.

During this same period FORSCOM expanded considerable effort and resources in an attempt to decrease reporting requirements on its subordinate commands and installations. As a result, reporting requirements initiated by Headquarters, FORSCOM decreased from a high 72 in 1974 to the present low of 49.

Table 6

REPORTS INITIATED BY HEADQUARTERS FORSCOM

FORSCOM's success in controlling internal report requirements has been
attributed to several key factors:

— Strong and continuous command emphasis and support.

— Establishment of a "sunset" rule which requires complete
rejustification of existing reports not less than once every two years.
Failure to rejustify results in automatic rescission of the report.

— Authority to initiate new reports and rejustification of exist-
ing reports is delegated only to staff agency chiefs; cannot be further
delegated.

— Field activities are directed not to comply with any report
requirement that does not contain reports control clearance.

Comments from MICOs and action officers at different levels of manage-
ment also provides some insight on the reports control program.

-- There is no real way to challenge an action officer or agency on the need for a report. Most MICOs do not have the experience or knowledge to make the decision on an information requirement.

-- Being a MICO is a boring and thankless job. It is looked on as a necessary evil.

-- The periodic review of information requirements required by Chapter 6, AR 335-15 creates additional reporting requirements. Plus, the review process does not include a feedback procedure to inform lower headquarters of the result of the review. Therefore, the reasons a report was or was not eliminated are rarely known.

-- It is not really reports control, it is reports review. We go through a motion with little impact on the final results.

-- It is not a perfect system but what would the information requirements be without it!

Although FORSCOM has seen an increasing trend in reporting requirements initiated by HQDA, army-wide there has been a decreasing flow from HQDA. The difference in the two headquarter's perception is the fact that not all HQDA reports require a response from every major command. As a result no two MACOMs have the same number of information requirements. Tables 7 and 8 indicate the steady decline in report requirements initiated by HQDA and other Federal agencies as of January 1983.

TABLE 7

RECURRING INFORMATION REQUIREMENTS INITIATED
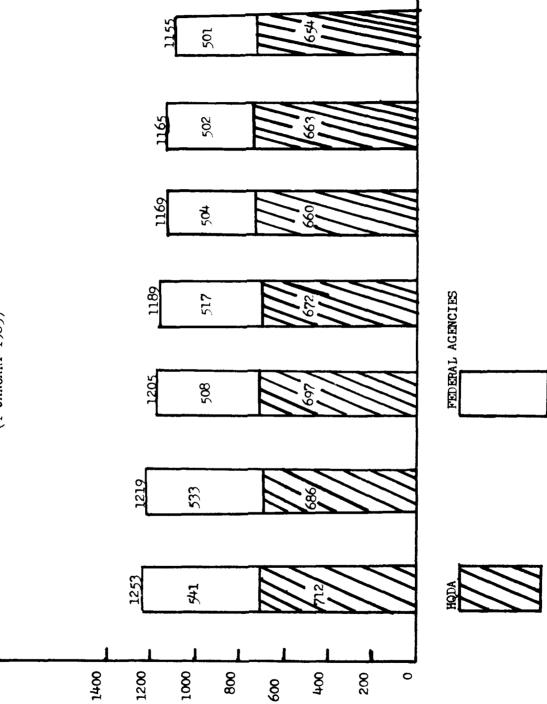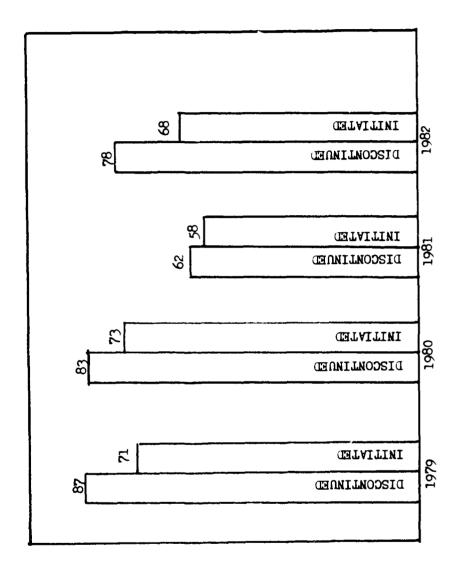BY HQDA AND OTHER FEDERAL AGENCIES
(1 JANUARY 1983)

20

TABLE 8

RECURRING INFORMATION REQUIREMENTS, HQDA
INITIATED/DISCONTINUED

CHAPTER III

INFORMATION RESOURCE MANAGEMENT

Reports are an important aspect of any management system; however, they are only a small percentage of the overall information base which must be available to support top decision makers of any large organization. Since the late 1970s the term "Information Resource Management" or IRM, has received increased attention. John Diebold, Chairman of the Diebold Group, Inc., defined IRM as the "management of information as a corporate asset" and cited the rapid increase of technology, particularly with respect to data processing and telecommunications, as the primary impetus to this new concept. Diebold and other advocates look to IRM as an essential, if not critical, process in the management of a modern organization.[1]

HISTORICAL PERSPECTIVE

During the 1950s, large mainframe computers were developed to process increasing masses of data. The utilization of these computers focused on high speed manipulation, storage, and retrieval of numerical data. These Automated Data Processing (ADP) systems were centralized, required highly trained operators, and had no interactive capability with the functional user. By 1975, technology had progressed to the point that on-line, decentralized data processing systems were providing increased support as repositories for management information, primarily at the operational control level. Since the late 1970s, the technologies of data processing, word processing, and telecommunications have all been involved in the processing

of information. Likewise, the volume of information being collected and processed, as well as management's voracious appetite for more information, has increased rapidly. Unfortunately, there has been little centralized planning or control of information processing, particularly with respect to supporting the middle and upper echelons of the organization. The result has been the proliferation of stand-alone systems characterized by limited sharing of information, increased reporting requirements, redundant data bases, and uncoordinated vertical information systems. In reality, information has been frequently treated as one time use items to be collected, used, and stored for little future use, even to the functional user who generated the information in the first place. The transition into the information age is made possible by applying new concepts of information management and integrating the technologies available. This opportunity is particularly significant in light of the critical need to manage scarce resources better and improve productivity.

INFORMATION RESOURCE MANAGEMENT TENETS

IRM is a relatively new concept in the formal sense. Over the last few years, there has been considerable discussion of IRM, its applications and usefulness. Advocates claim that, by focusing on information as a resource, IRM maximizes the availability of information and controls its use in the organization. This implies that information must be managed as any other resource, specifically with respect to comprehensive planning and the utilization of guidelines, standards and conventions for information handling.

The basic tenet of IRM is that information should be treated as a resource and handled so it can be shared by all members of the organization. This implies information has the same basic characteristics as the

factors of production--men, money, machines and material. Each has value, cost, qualities, and design alternatives which must be managed to provide the output of the organization. As a shared resource, information is not the private property of the functional manager who first acquired and processed the data, used the resulting information, and then stored it for possible future use in his functional stove pipe. On the contrary, information has potential for use by other managers and must be integrated with the relevant information retained elsewhere in the organization. In this way, useful information is available not only to all functional managers, but to line executives and top management as well.

A second tenet is that IRM focuses on the needs of the decision makers. Information must be sufficient, accurate, timely, and properly formatted to be useful to top management for planning and decision making, not just for operational control as it is commonly used today. In this way, information allows the manager to be proactive rather than reactive, thus insuring the organization's responsiveness to its dynamic environment.

Third, IRM requires that information be derived from the organization's goals and objectives. Inherent in this tenet is the requirement to analyze the organization from the top-down to determine what activities, or processes, must be undertaken to accomplish stated goals and objectives. Once these critical processes are identified, along with information and support systems, an information architecture is developed independently of the organizational structure and validated by analysis of the views of managers at all levels. The process described above is commonly referred to as Information Systems Planning (ISP). More on ISP later.

The fourth tenet is that IRM is keyed toward life cycle management of the resources of the organization. This refers to the information resource,

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as well as the traditional resources of labor, equipment, money, and materials. It is important to remember that information has its own life cycle, similar to that for other resources. Invariably, however, information is either discarded or stored where it is not easily retrieved. Under IRM, the disposition step is characterized by judicious filing and formatting of information so it can be easily retrieved by any authorized user then redisposed. This allows the information life cycle to be dynamic and ensure the availability and control of this valuable resource.

Fifth IRM must be managed through cost-value analysis. This implies that deliberate and consistent steps must be taken to determine the relative costs of alternate means for acquiring and managing information. The value of information is determined based on its contribution to the goals of the organization and can sometimes be measured in terms of the differential between the presence and absence of information generated by a given information system.

The last tenet is that IRM is built on the existing programs and functions; that is, it is evolutionary. Implementation of IRM should be phased and improvements applied gradually so that they can be digested by the organization. Proposed improvements, identified during the ISP process, should be prioritized for resourcing and then programed for implementation. It can be expected that the building of a IRM system will take a considerable amount of time.

In summary, IRM should provide timely, accurate, and useful information to the decision maker and his staff and be supportive of the organization's goals and objectives. In today's environment of uncontrolled information handling, this is a real challenge. On the other hand, technology offers unprecedented opportunity to make IRM goals achievable.

The challenge is really how to tie together available technologies and apply the new management concepts. The goal is an integrated information management system which allows information sharing. Any progress in this direction will undoubtedly improve the quality of decisions made in the organization.

Regardless of one's views on IRM, all authorities on information systems management recognize the inadequacy of today's ADP-based Management Information System (MIS) structure to process useful information for decision making. Most agree that the desired information system should have certain characteristics; specifically it should be timely, interactive with the functional user, and accessible yet secure. This sounds utopian and it is a foregone conclusion that the desired state is very elusive. The point is that managers and information system planners should recognize this state as a goal toward which they should move patiently, step by step.

INFORMATION RESOURCE MANAGEMENT AT HQDA

With the foundation of Information Resource Management concepts and the history previously outlined, it is now time to view HQDAs past and present efforts to manage information. The history of centralized management of automated information systems at HQDA can be broken down into two distinct periods of development: AIDS to DMIS (1962-1975) and DMIS to C^4 (1975 to present).

In 1962, the Army created a Special Assistant to the Chief of Staff for Army Information and Data Systems (AIDS). Headed by a Major General, it had broad automation systems planning responsibilities. But, at the same time, the computer acquisition function was turned over to the Comptroller. Thus, at HQDA, there were two agencies that shared automation

responsibility. Although the AIDS function was planned to include broad information systems management, the continuing emphasis was on buying equipment. The unwritten rule was to keep procurements legal and the Army out of the headlines. There was little systems planning.

Centralized systems management was not only absent in the Army but in other federal agencies as well. So in 1965, the Congress passed Public Law 89-306, which came to be known as the Brooks Bill. Its main importance to the Army was that it led to the appointment of the ASA (IL & FM) as the Army's principal for automation management. It also established the General Services Administration as the titular head of the computer procurement in the federal government. By 1968, HQDA realized that there was still no single agency in charge of the automated information program. It also recognized that there were no effective systems that would permit the senior management to oversee personnel, funding, spaces, and material programs.

An examination of the situation was conducted under the "Study of Management Information Systems Support" (SOMISS) which investigated the problem of information systems. The study found duplication of functional software (such as 49 payroll systems) and that functional guidance for automated systems came from many sources. As a result of SOMISS the US Army Computer Systems Command (USACSC) was established to provide central software life cycle responsibility for all software capable of satisfying the needs of more than one Army command. Other SOMISS results were: (1) A Directorate of Management Information Systems (DMIS) was established within the Office of the VCSA to perform functions formerly assigned to AIDS and the COA; (2) HQDA staff agencies were assigned responsibility for management of automated systems designed to meet their requirements. For example, the DCSCOG was made functionally responsible for automation at all Army

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levels involved in logistical needs. However, SOMISS provided only limited
control for policy formulation, planning and resource management for auto-
mation in command and control, weapons, intelligence, and communications
systems.

In August, 1976, the Vice Chief of Staff directed the Management
Directorate, OCSA, to develop a charter and implementing directives for the
central manager of Army automation in the office of the Chief of Staff.
That directive led to the conduct of the Army automation Management Study
in February 1977. Based on the findings of the study the charter for the
Director for Army Automation was developed. The DAA would have overall
authority and responsibility for army-wide automation management. The DAA
would manage Army automation through macro-level policy, master planning,
and resource management responsibilities specified in implementing direc-
tives.

During 1978 the DAA function was reviewed and a reorganization was
undertaken to change the Directorate to Assistance Chief of Staff for
Automation and Communications (ACSAC). The ACSAC was established as a
general staff agency created out of the Army Automation Directorate and the
Telecommunications Command and Control Directorate of DCSOPS. The reorga-
nization of these two directorates under one organization in October 1978
was a further effort to provide one overall responsible authority for
automation and communications for HQDA. However, in 1981 ACSAC was dises-
tablished and the Directorate for Computer, Communications, Command and
Control (C^4) formed. The prime rational for this change to ADCSOPS was the
need to apply automation, and communications management to the command and
control function.

As the Army struggled to find a solution to its automated information systems management, very little attention was given to the control or management of information requirements. As a result the functions of information management are currently distributed across several organizations. In essence, the C^4 Directorate, DCSOPS, is the current focal point for Army Automation management. The organization is responsible not only for policy but also for resource control and, therefore, possesses several of the functional responsibilities for automated information management as an outgrowth of its automation responsibilities, e.g., budgeting, planning. The United States Army Computer Systems Command (USACSC) under staff supervision of the ADCSOPS, C^4, is responsible for the development and maintenance of multi-command standardized systems. As a designated assigned responsible agency they develop, integrate, program, test, install, and maintain standard system software and documentation. In its documentation role, it has the responsibility for the implementation of DOD documentation standards and development of army documentation standards. The United States Army Computer Systems Selection and Acquisition Agency (USACSSAA), which is under the operational control of the ADCSOPS C^4, provides technical and legal support services to the Army staff and major commands. The agency is responsible for selecting and procurring high dollar value ADPE items and services which require a data processing acquisition for GSA. The Office of the Adjutant General (TAG) is responsible for all army matters concerning administrative management. In recent years TAG has become increasingly involved in information management. In this area TAG is responsible for approval of the Army's data gathering forms, overseeing the management, cataloging and disposition of army information requirements, and the army-wide responsibility for word processing and micrographics. In addition, the TAG is solely responsible for the policies concerning the

Management Information Resource System.

From the preceding discussion it is clear that responsibilities for managing automated systems and information are spread throughout HQDA. However, as will be discussed later in the study, efforts are being made to alleviate this situation.

WHO USES INFORMATION

Top management's ever increasing need for information on which to base decisions is the primary need for an information system. But, who really uses the information and for what purpose? At HQDA it does not take long to understand that the action officer is the major user or conduit of information. In addressing information issues, the role of the action officer is important to understand.

First, one of the primary roles of the action officer is support of the informational needs of the General Officers. The action officer performs research, develops reports, and suggest alternatives and a recommended course of action. In light of these responsibilities the action officer must frequently gather a large variety of information to assess the cost and operational implications of the "actions" he processes. The action officer is expected to be fully versed in his particular area of expertise and must be able to explain the limitations of the current and proposed procedure. During the action evaluation process external considerations may have to be addressed. He spends much of his time solving or evaluating complex problems and proposals.

The types of information requests that the action officer receives can best be described as varied. The nature of the information requests depends

on the specific action officer and the organization he supports. Some action officers questioned stated that the types of information requests showed little recurring structure or form and normally deal with the action officer's organizational responsibilities. Some actions can be answered within the action officer's agency but very often he must gather information from other organizations and from external sources.

Frequently, the most difficult problem facing the action officer are knowing precisely what information is available and knowing where and how to secure this needed information. Some action officers stated that they spend much of their time attempting to find out what information was available and where it could be located. Generally, the information source available can be divided into five basic categories.

-- OPTIMIS - OPTIMIS is a data base of some 250,000 prior actions or documents with terminal access throughout the army staff. The OPTIMIS system allows retrieval of these actions and documents through key word retrieval methods from its data base. Discussions with action officers indicated that in many instances, due to the somewhat unique information needs surrounding each action, the OPTIMIS system did not contain the type of information necessary to respond to the action and generally was found to contain insufficient information. The system is, of course, not classified which further limits its usefulness. Another weakness is the small data base when considering the army staff produces over three-quarters of a million documents each year. Therefore, although there are many OPTIMIS terminals available, little use is being made of them by action officers.

-- Automated Reports - Although automated reports are frequently consulted during the action process, they may not contain the type of information required to complete the action. Automated reports usually

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contain information required on a recurring ba^r s, while action officer's
information needs are usually non-routine. They need to browse through a
variety of information sources and follow a trail of information from one
report or file to another.

-- Informal Action Officer Network - In an attempt to deal with
information gathering problems facing most action officers, an informal
action officer network has evolved. Action officers frequently develop
informal, manual lists of information sources. These "sources" are fre-
quently shared within the action officer network in an attempt to establish
a manual "information directory" to enable the action officer to determine
what information is available and where it is located.

-- Committees - Frequently, committees are convened to identify
the information resources to complete an action paper. The purpose of the
committee is to gather information for a particular action from numerous
sources, frequently with different perspectives. Although this method of
information gathering can be effective because of the ability of each
committee member to interact with other members, the committee approach
tends to be a manpower intensive method of gathering information. There-
fore, its use is usually reserved for critical actions that require exten-
sive coordination and when an answer to a specific question is not needed
immediately.

-- Other - This category contains such generally non-automated
information sources as:

- Newspapers

- Congressional Record

- Other DOD Sources

- Professional Publications, etc.

Action officers rely on this category of information sources very heavily. They are frequently required to assess the impact of external factors when analyzing their assigned actions and because of the nature of his function, is required to stay current in his particular area of expertise. Keeping current is frequently best accomplished by gathering information concerning his subject area via these information sources.

The action officer generally is not the decision maker but he can influence the decision process. The action officer receives information, processes it, and then provides information to the decision makers. The action officer influences the decision making process by the way the response to the action is structured, the sources of information used, the other action officers consulted, and the amount of time consumed in generating his response.

To sum up, the role and function of the action officer makes him a prime beneficiary of an information management program. Because of his key role in processing information, as both a user and a provider of information, any steps taken to make the information retrieval process more efficient for him should provide substantial benefits to the Army as a whole. The information gathering process of the action officer can be improved by providing him with information on what data is available, where it is located, and circumstances pertinent to its use. By streamlining the information gathering process for the action officers, the response time for actions could be reduced and an increase in the quality and completeness of the data should result, facilitating the decision making process.

INFORMATION CONCERNS AT HQDA

There is a clear need in HQDA for information relative to the plans, needs and activities of the Army. During the course of this study several

recurring concerns about the information environment at HQDA continued to surface.

The field perceives as excessive and redundant the reporting requirements levied upon them by HQDA. These reporting burdens can take two forms: requirements for new and additional information beyond those presently established; and requirements to report the same data to multiple recipients which increases the reporting requirement on the field. There are numerous instances (as with personnel and financial data or NAF data) where the same information is reported up through parallel, but separate channels to Headquarters, DA. This information is then used by various staff agencies to manage their individual programs and is often not shared across functional areas.

While this parallel flow of information may be efficient or effective for the individual staff agencies, it can impose a tremendous burden on the commanders in the field by causing them to supply essentially the same information to each of several HQDA agencies. This reporting burden is of real concern to the DA staff but the information needs of the agencies must still be satisfied. HQDA lacks an effective mechanism for monitoring and controlling this reporting burden. Although the TAG has a subject/key word data base which is used by information control personnel the system is far from foolproof and requires additional effort.

A further consideration is that at times the information requested by HQDA is not integrated by the field commanders into their local management operations. Thus, the information requested by Headquarters, DA is viewed by some as overhead and a burden. There is apparently inadequate feedback of the information which HQDA collects to assist managers in the field. One contributing cause to the heavy burden is the tendency for headquarters

management and staff to focus on reports formats and not on the information contained in them. In many instances information is viewed as the reports themselves rather than the contents of the report. Such a view leads to the generation of parallel request for information in order to receive it in a more convenient format.

Another concern is that while information flows in a particular organization or agency is sufficient for their current needs, problems immediately arose when a staff needed information from another staff agency. Under these circumstances, it was often not clear where to look to find all and the latest information pertinent to the request. There is no automated central reference service in HQDA to assist in this search, although the Adjutant General's Office does provide the informal service mentioned earlier in the study (OPTIMIS). The result is a substantial burden on the action officers to manually locate relevant information.

The difficulty in determining what information is available, especially in automated systems, is due, in part, to the current stovepipe approach to information systems development. The stovepipe approach is a vertical development of information systems to service individual functional area needs. Vertical systems are typical of the information systems at HQDA. The ODCSLOG develops logistical-oriented systems, the ODCSPER develops personnel systems. Some opinions indicate that although the stovepipe systems are needed and effective within the individual staff organizations, horizontal integration in systems planning would be of great benefit to the Army as a whole. Such a horizontal approach that cuts across the functional areas in determining systems requirements is indeed rare in any headquarters today.

A third concern is the tendency in HQDA to develop automated systems to support one-time requests which may or may not be asked for again. Thus,

HQDA receives requests for information from organizations external to the Army and may expand considerable resources in developing the response. Quite often, in order to reduce the cost of answering that same question again, an automated system is developed or selected data elements are added to a current system so they will be ready the next time, should the need arise. Unfortunately, there is no guarantee that the same question will ever be asked again to warrant the expense of developing and maintaining the automated system. Further, additional reporting requirements are levied on the staff or the field to provide data in the event it is needed. Once instituted, such systems or reporting schemes have an inertia which is difficult to control, and the "requirement" persists even though the need may stop. The Management Information Control System of TAG is an attempt to identify redundant and unused reports, but it currently does not address the individual data items contained in each and every automated report. It falls upon each individual staff agency to police itself.

The persistence of information requirements in systems is really a symptom of the actual problem. The fundamental problem is that the staff agencies cannot get the data they need when they need it, so there is the tendency to develop and retain local information systems in anticipation of future needs.

A fourth concern is that the more complex the decision the less reliable and the more incomplete the information is to support the decision. The decision makers at HQDA are aware that they are receiving inaccurate or incomplete data from their automated systems, but they cannot quantify this drop in reliability or completeness though they believe it is considerable. Inconsistencies in information obtained from more than one system also is a

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source of concern. The current HQDA information systems do produce incon-
sistent data, partly because of their functional orientation and lack of
standardization. The inconsistent data that might be released to external
sources could be a source of embarrassment to the Army. In addition, the
use of inconsistent data can affect army operations. Because of the many
interrelationships of functions among the various staff agencies data that
is inconsistent can upset these relationships and potentially affect over-
all army operations.

The last area of concern was the need to support rapid decision making
such as the impact of selected changes in the environment, e.g., budget
cuts or mobilization. "What if" type questions frequently arise and the
current method of gathering information is slow and frequently unrespon-
sive. Most current HQDA information systems were not designed to support
an environment of changing parameters. Most systems simply accept data,
process it, and produce reports. Information to support "what if" type
drills is now usually the result of a manual process. What HQDA would like
to have is the ability to interact with the system, change the parameters
and see what happens.

In reviewing who uses information and the concerns of HQDA over the
information environment several aspects become increasingly clear.

-- The action officer is the primary user of information and acts
as an interface between the top decision makers and the information systems.
If an action officer does not have access to information that is accurate
then the impact of the decision will have far-reaching consequences. Poor
information will lead to a poor decision.

-- The field is being requested to report redundant information
up through vertical "stovepipe" information systems. This in turn places

an ever increasing burden on major commands to respond to HQDA needs and absorbs more resources. In short, reporting the same data more than once increases the cost of information processing.

-- There is not a central location at HQDA for locating up to date and correct management information. Existing mechanisms concentrate mainly on cataloging reports not indexing information and those that do index information are of little use.

-- A lack of data sharing increases the cost of the data processing function. Each time a specific information need is identified, the data is collected or re-collected or a new report is prepared and the cost of data processing in the Army is increased.

-- Decision makers at HQDA are aware that their information systems are producing inaccurate data but there is no way of implementing a quality control mechanism using the present HQDA information control system.

CHAPTER IV

THE PRESENT

As mentioned earlier in this study Headquarters, Department of the
Army is making an effort to establish some type of meaningful Information
Resource Management (IRM) program. In January 1981 the Information
Resource Management Office was established in the Management Directorate,
Office of the Chief of Staff; however, its activities have been relatively
limited until very recently. On 20 October 1982 the Secretary of the Army
and the Chief of Staff initiated a study (Annex C) to "clarify the essen-
tial processes and information needed by the Secretariat and the Staff to
accomplish the Army's business." The inquiry known as the "Vesser" study
(after the study's team chief, Major General D. A. Vesser) completed the
Information System Plan for HQDA and published its finding in December
1982; however, the study has not been released for distribution as of mid-
April 1983. The report identified numerous problems in how information is
being managed in the Army, validated the ineffectiveness of the current
Information Resource Management Office, and recommended that information
management and automation management be consolidated in the same HQDA staff
agency.

A decision paper was sent to the Chief of Staff on 21 March 1983 with
a recommendation for one of three options on the establishment of an Infor-
mation Resource Management organization (Annex D). The proposed Informa-
tion Resource Management Directorate (IRMD) would be formed in the Office
of the Chief of Staff. Placement in OCSA reflects the multi-functional

aspect of information and executive commitment to its management. The IRMD would take over the functions and resources of ARSTAFF information management activities. This includes the IRM office in the Management Directorate, OADCSOPS (C^4) (less command and control and possibly other tactical communications elements), and the TAGO automated office systems, management information control and statistical clearance functions. The focus of the IRMD will be information management, and not information systems management as in previous staff organizations, e.g., MISD. The systems management function will fall on a new automation command.

The United States Army Automation Command (USAAC) will be a new MACOM built around the nucleus of the United States Army Computer Systems Command. The USAAC will be the primary executor of the automated information portion of the IRM program and will provide for single command management of automation assets.

To implement the concept a Special Assistant to the Director of the Army Staff for Information Resource Management in the grade of Major General or civilian equivalent is recommended. This Special Assistant will be charged with conducting the detailed, integrated planning necessary for both the IRMD and USAAC. A staff of approximately 25 personnel will also be required.

During the staffing of the decision paper, most staff agencies concurred in the establishment of the DIRM and the USAAC but there were exceptions. The emotional issue of automation ownership and natural resistance to change appears to have clouded planning for improvement of the Army's information management program. The Army's automation program is a high value and growing undertaking consisting of 104 key automated systems with 29 more under development at a yearly cost of well over a billion dollars (Annex E).

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It is worth noting that other military organizations have come to the realization that information management is a must for the future.

-- The United States Air Force has established the Assistant Chief of Staff for Information Systems under the direction of a Lieutenant General who is responsible for automation, communication and most office automation. A transition team is working to inaugurate the office on 1 June 1983.

-- The Navy staff is currently having a study conducted by the National Academy of Sciences to review automated data processing in the Navy. Presently, the Navy has a Rear Admiral level command, the Navy Automatic Data Processing Command, which is designed to tie together all data processing.

A review of the Army's MACOMs reveals that some are not waiting for HQDA to provide guidance on information resource management but are "racing" ahead with their own programs.

The present Headquarters, TRADOC organization for information management resulted from a 1979 reorganization to improve mission and support management. This reorganization disestablished the Directorate of TRADOC Automated Management Information Systems (DTAMIS) as a special staff office, transferred computer operations and common user-oriented programers/systems analysis to the Fort Monroe garrison, and placed responsibility for information systems management, including the planning and control function under the Deputy Chief of Staff for Resource Management.

At DARCOM the Director of Management Information Systems (DMIS) reports to the Chief of Staff and exercises the full range of responsibilities associated with providing ADPE support to HQ DARCOM as well as controlling the operations of two large ADPE field activities, i.e., Logistics Systems Support Activity and Automated Logistics Management System Activity.

FORSCOM is aggressively pursuing an information resource management program. Consistent with trends both inside and outside government, FORSCOM examined the applicability of information resource management in late 1981. In its preliminary analysis, the command identified problems related to limited information sharing, a lack of information planning, proliferation of stand-alone processing systems, and unrelated, redundant data bases. As an example FORSCOM found that almost one-fifth of Headquarters, FORSCOM manpower assets were engaged in the processing of automated data/information using 162 ADP systems administered by various staff agencies. Thus, in March 1982, FORSCOM established an Information Resource Management Office (IRMO), directly under the Chief of Staff, to perform information master planning and coordinate the management of information as a resource. As a first step the Headquarters has completed a study conducted by a team of senior managers representing the primary functional staff elements of the command. The study is now in the last phases of being completed. Although HQDA has been attempting to "get a handle" on information resource management longer than FORSCOM, the latter appears to be making greater strides and has more command emphasis than the former.

The Information Resource Management studies conducted by both Headquarters, DA and Headquarters, FORSCOM followed a Business Systems Planning (BSP) approach developed by IBM. The concept is outlined in Annex F.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

In the past three decades Army's top management has not been sincerely committed to the development of an Information Resource Management program. This in turn has allowed the fragmentation of automation and informational systems with HQDA, and, even fostered "turf battles" between functional staff agencies concerning "stovepiped" information systems. Present proposed efforts by HQDA to manage automation and information are being resisted by functional staff agencies because of emotional issues.

FORSCOM has had great success in limiting reports and initiating an information management program. These efforts are the direct reflection of command interest and emphasis placed on the program.

A concept (Business System Planning) does exist which provides the Army with a structured systematic approach to implementing an information management program for Headquarters, Department of the Army.

Compliance with report management oriented regulations by the functional staff organizations at the three levels of management can best be described as being within the letter of the regulation but not necessarily within the sprit of the regulation.

RECOMMENDATIONS

That Headquarters, Department of the Army establish a single directorate under the Chief of Staff for the management of automation and information

systems not only within HQDA but Army-wide. This manager would be responsible for:

— Coordination of the policymaking, planning, and budgeting of information activities.

— Efficient application of information resources to meet organizational missions and goals.

— Advising management on information plans, budgets, technology, products, services, and costs.

— Information broker acting as a bridge between information science and technologies on the one hand, and users and managers unfamiliar with the technologies, their applications, costs and values on the other hand.

If the information resource management program is to be successful then top army management must support its implementation as well as provide direction and continuous emphasis.

Since the idea of managing information as a resource is new, it is essential that all information users and managers have a comprehensive understanding of the concept and its management mechanisms. To accomplish this an academic program must be developed and made a part of service school curriculums especially at senior service schools.

ENDNOTES

1. Diebold, John, Information Resource Management. The New Challenges Infosystem, May 1981.

SELECTED BIBLIOGRAPHY

Army Regulation 10-5, Organization and Functions, 1 December 1980.

Army regulation 335-11, List of Approved Recurring Management Information Requirements, 1 November 1982.

Army Regulation 335-15, Management Information Control System, 15 January 1983.

Department of the Army (DACS-DMI), Memorandum; Subject: Actions to Improve the Quality and Flow of Army Information--ACTION MEMORANDUM, 21 March 1983.

Department of the Army (DAAG-OPI), Army Information Requirements Listed by Subject (Subject/Keyword) 31 December 1982.

Department of the Army (DCSOPS (C^4), FY 1984 President's Budget--Automation, updated.

Department of the Army (TAGO-OPTIMIS Office), Sign-on Instructions for OPTIMIS VAX 11/780 Computer System, November 1982.

Author Young and Company. The Design of an Information Management Program for Headquarters, Department of the Army. Contract Number MDA 903 78-6-0483, 26 February 1980.

Diebald, John. "Information Resource Management--The New Challenges." Infosystem, May 1981.

FORSCOM Circular 335-82-11, List of Approved Recurring Management Information Requirements, 15 September 1982.

International Business Machines Corporation. Business Systems Planning-- Executive Overview, 2d Edition, IBM Corporation, July 1981.

HQ FORSCOM (AFCS_IR). Information Resource Management--A Compendium of References, 24 February 1983.

HQ FORSCOM (AFCO-M). Information Resource Management Study, 9 March 1982.

HQ FORSCOM. Information Systems Planning Study Report, 18 March 1983 (An Overview).

HQ FORSCOM (AFCO-M). Reports Briefing Packet, 1980.

Naisbitt, John. Megatrends: Ten New Directions Transforming our Lives. NY: Warner Book Inc., 1982.

Paperwork Reduction Act, PL 96-511. Title 44 USC 3506, 11 December 1980.

ANNEX A
Table A-I
HIGH COST REPORTS REQUIRED OF FORSCOM ACTIVITIES
(000)

Proponent Staff	HQ	Reports Control Symbols	Submitted	1980 Cost	1982 Cost	Manhours 1982
COMPT	DA	CSCAB-205 (Note 1) Budget Execution & Review	Annual	2,300.0	2,014.0	169.3
COMPT	FCOM	AFCO-105 Budget Development & Review	Annual	Not Available	1,771.0	151.1
COMPT	DA	CSCAA-112 (Note 2) Status of Reimbursements	Monthly	1,512.3	16.8	1.6
COMPT	DA	CSCAB-242 Report of Military Personnel Strength	Monthly	506.1	83.0 (Note 3)	8.5
COMPT	DA	CSCFA-304 Fiscal Station Accounting/Clearence Report	Monthly	1,079.2	1,079.2	75.6
COMPT	FCOM	AFCO-2 Status of Operating Resources & Monthly Flash Report	Monthly	1,910.0	2,402.3	233.9
COMPT	DA	COCOA-24 NAF Financial Statements	Quarterly	703.9	1,351.9	236.6
AG	DA	AG-534 USAR Unit Record of Reserve Training	Monthly	1,842.4	1,842.4	275.5
J3	JCS	JCS-6-II-2-1-6 Unit Status Report	Monthly Semi-Annual	1,820.9	1,820.9	202.3

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LOG	DA	CSGLD-1042 Material Condition Report	Quarterly	713.1	713.1	84.5
LOG	DA	1102-GSA-AN Admin Motor Vehicle Fleet	Annual	546.8	546.8	63.5
ENG	DA	ENG-282	Monthly	2,400.0	2,400.0	200.0

Note 1 Reports combined prior to 1980; seperate reports in 1982.

Note 2 Recently changed to CSCAA-118 which curtailed reporting requirement.

Note 3 Completely automated below MACOM level; cost decreased.

Note 4 Operational computer systems cost not included in the totals.

ANNEX B

Table B-I

FEDERAL AGENCY REPORTING REQUIREMENTS

Agency	Number of Recurring Reports
Congress	14
GAO	4
OMB	9
Dept of Agriculture	1
Dept of Commerce	13
Dept of Health and Human Services	4
Dept of Education	2
Dept of Interior	4
Dept of Justice	5
Dept of Labor	9
Dept of State	5
Dept of Transportation	2
Dept of Treasury	22
CIA	1
EEO Commission	3
Office of Personnel Management	23
EPA	4
Federal Energy Regulatory Commission	3
GSA	14
Nuclear Regulatory Commission	4
Postal Service	2
Smithsonian	1
VA	1
Total	150

Data From AR 335-11

APPENDIX 1 to ANNEX B

Table B-II

OTHER DEFENSE AGENCY REPORTING REQUIREMENTS

Agency	Number of Recurring Reports
SecDef	8
JCS	11
Dept of Navy	9
Dept of AF	19
Under SecDef (R&E)	44
Under SecDef (Policy)	2
Asst SecDef (Compt)	90
Asst SecDef (Health Aff)	18
Asst SecDef (ISA)	5
Asst SecDef (Legislative Aff)	1
Asst SecDef (Manpower/Logo)	133
Asst SecDef (PA)	6
Asst SecDef (C³I)	1
Asst SecDef (R&O)	1
SecDef General Council	6
Asst to SecDef (Atomic Energy)	1
National Security Agency	1
Def Intel Agency	2
Def Commo Agency	19
Def Language Center	6
Def Nuclear Agency	4
Def Security Asst Agency	12
Def Log Agency	14
Per Diem Commission	2
Total	419

Data From AR 335-11

DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 20310

20 October 1982

SUBJECT: Information Systems Planning (ISP) Study

SEE DISTRIBUTION

The dynamic nature of the decision-making process requires that the Army's leadership have continuous access to a responsive and accurate information base. To that end, a study project is commissioned under the joint direction of the Assistant Secretary of the Army (IL&FM) and the Director of the Army Staff to clarify the essential processes and information needed by the Secretariat and the Staff to accomplish the Army's business.

You will soon be contacted by the study group to discuss in detail the requirements of your organization as they relate to its performance in achieving the Army's goals and objectives. Major General D. A. Vesser heads the distinguished group we have appointed. Other full-time members are MG W. J. Mehl; Mr. V. O. Ewell, Jr.; Mr. M. Zimmerman; BG A. R. Pede; BG B. J. Maddox and BG R. L. Gordon. Lieutenant General R. L. West (USA Ret) and Mr. D. Gray of IBM are consultants to the group. It is essential that you be candid in focusing on the information you require, in particular such issues as critical success factors, existing problems, possible solutions, and on-going plans and activities.

This effort holds great significance for our future ability to improve the Army. Hence, your personal involvement is key.

E. C. MEYER
General, United States Army
Chief of Staff
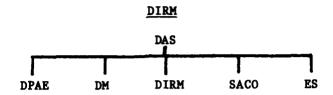
John O. Marsh, Jr.
Secretary of the Army

ANNEX D

PROPOSED INFORMATION RESOURCE MANAGEMENT ORGANIZATIONS

OPTION 1

DIRECTORATE OF IRM (DIRM)

```
              DIRM
               DAS
    ┌──────┬────┴───┬───────┐
  DPAE    DM     DIRM    SACO    ES
```

Combine: o Automation functions from C-4

o Office automation, reports control, and statistical clearance from TAG

o IRM function from DM

o ISP functions of information architecture, budget, and data class ownership

INFORMATION FUNCTIONS

1. Develop and promulgate policy for Information, Automation, Records Management, Micrographics, Micropublishing, and Forms Management.

2. Develop and implement an integrated information systems plan to support senior decision makers. The plan should include automated support, office automation support, and manual systems considerations.

3. Define and maintain a detailed information systems architecture based on the ISP architecture.

4. Provide detailed policy and enforce information standards to ensure common definitions to improve information exchange and sharing.

5. Provide detailed policy for an Army data management program. Review program for effectiveness.

6. Task and monitor appropriate follow-on actions from the ISP study.

ADMINISTRATIVE FUNCTIONS

1. Establish specific policy and management of entire MICO and statistical clearance functions.

2. Establish and control data management standards related to information requirements.

3. Perform review and evaluation studies on previously approved information requirements to ensure a continuing need and value for the information.

4. Provide for the management and control of information released by the Army to ensure it is consistent with existing Army policies, procedures, and objectives.

5. Ensure the management and control of data at the entry level of automated and manual systems.

6. Establish policy and manage office automation technology for the Army.

7. Direct the technology assessment activities of office automation.

8. Approve the acquisition and use of office equipment to be used in an automated configuration.

AUTOMATION FUNCTIONS

1. Develop automation plans and architectures that include office automation requirements.

2. Develop and promulgate automation policies.

3. Provide the full range of information technology assessments.

4. Establish policies and ensure procedures in the development of directories, data classes, and appropriate dictionaries from inventorying existing information systems and data bases.

5. Establish policies and ensure procedures that provide a workable structure in which catalogued information is shared by system managers.

OTHER FUNCTIONS

1. Coordinate with ACSI to insure all aspects of information security are considered in IRM policy development and promulgation.

2. ISP recommended HQDA services under DIRM but it should be considered for inclusion under AUTOCOM.

3. Perform program budget director function.

4. Communication is not included under the DIRM concept.

DIRM

ADVANTAGES:
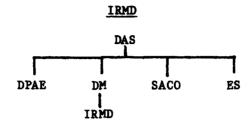
1. Combines IRM functions (automation and administration)under a single manager.

2. Allows for central information policy development, coordination, and promulgation.

3. Resolves turf issue.

4. ISP recommended DIRM organization.

5. Most IRM organizations including the Postal Service and IBM use a single manager concept.

6. Consistent with the split of automation and communication below HQDA.

DISADVANTAGES:

1. Major reorganization (88 spaces, 15 new and 73 transferred).

2. Perception of return to DMIS.

3. Separates automation and communication.

OPTION 2

IRM DIVISION (IRMD)

IRMD

```
              DAS
               |
   ┌───────┬───┴───┬───────┐
 DPAE      DM     SACO     ES
            |
          IRMD
```

Add: o ISP functions of information architecture, budget and data
            class ownership

INFORMATION FUNCTIONS

1. Develop information policy and coordinate on related policies.

2. Review and coordinate information systems plans.

3. Define and maintain a detailed information systems architecture based on
the ISP architecture.

4. Provide general policy and coordinate an information standards program.

5. Provide general policy and review of the Army data management program.

6. Task and monitor appropriate follow-on actions from the ISP study.

ADMINISTRATIVE FUNCTIONS

1. Develop general IRM policies associated with the management of the MICO
and statistical clearance functions.

2. Issue general guidance on data management standards.

3. Establish general IRM policies that would relate to the release and use
of Army information.

4. Establish general IRM policies for the identification, standardization,
and utility of data prior to its entry into automated and manual systems.

5. Develop general office automation policies that are consistent with
established IRM principals and objectives.

AUTOMATION FUNCTIONS

1. Monitor and coordinate development of automation plans.

2. Monitor and coordinate automation policies.

3. Monitor technology assessment.

4. Establish policies in the development of directories, data classes, and appropriate dictionaries from inventorying existing information systems and data bases.

5. Establish policies that provide a workable structure in which catalogued information is shared by system managers.

OTHER FUNCTIONS

1. Coordinate with ACSI to insure all aspects of information security are considered in IRM policy development and promulgation.

2. ISP recommended HQDA services under DIRM but it should be considered for inclusion under AUTOCOM.

3. Participates in budget development.

4. Communications is not included under the IRMD concept.

IRMD

ADVANTAGES:

1. Minimal staff impact (15 new spaces).

2. Quickest option to implement.

3. Small organization in OCSA.
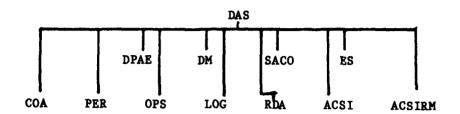
DISADVANTAGES:

1. Matrix approach to IRM management with responsibility for IRM functions split between several managers

2. Does not provide single management of the IRM functions.

3. Very little change from existing organization and functions that have not met the objective of IRM.

4. Inadequate resources to perform the mission.

OPTION 3

ASSISTANT CHIEF OF STAFF FOR IRM (ACSIRM)

ACSIRM

```
                         DAS
   ┌──────┬────────┬────────┬────────┬──────┬────────┐
   │      │  DPAE  │   DM   │  SACO  │  ES  │        │
   │      │        │        │        │      │        │
  COA    PER     OPS      LOG      RDA    ACSI    ACSIRM
```

Combine: o   Communication function from C-4

          o   Automation functions from C-4

          o   Office automation, reports control and statistical clearance
              from TAG

          o   IRM function from DM

Add: o   ISP functions of information architecture, budget, and data
              class ownership

INFORMATION FUNCTIONS

1. Develop and promulgate policy for Information, Automation, Records
Management, Micrographics, Micropublshing, and Forms Management.

2. Develop and implement an integrated information systems plan to support
senior decision makers. The plan should include automated support, office
automation support, and manual systems considerations.

3. Define and maintain a detailed information systems architecture based
on the ISP architecture.

4. Provide detailed policy and enforce information standards to ensure
common definitions to improve information exchange and sharing.

5. Provide detailed policy for an Army data management program. Review
program for effectiveness.

6. Task and monitor appropriate follow-on actions from the ISP study.

ADMINISTRATION FUNCTIONS

1. Establish specific policy and management of entire MICO and stat
clearance functions.

2. Establish and control data management standards related to information requirements.

3. Perform review and evaluation studies on previously approved information requirements to ensure a continuing need and value for the information.

4. Provide for the management and control of information released by the Army to ensure it is consistent with existing Army policies, procedures, and objectives.

5. Ensure the management and control of data at the entry level of automated and manual systems.

6. Establish policy and manage office automation technology for the Army.

7. Direct the technology assessment activities of office automation.

8. Approve the acquisition and use of office equipment to be used in an automated configuration.

AUTOMATION FUNCTIONS

1. Develop automation plans and architectures that include office automation requirements.

2. Develop and promulgate automation policies.

3. Provide the full range of information technology assessments.

4. Establish policies and ensure procedures in the development of directories, data classes, and appropriate dictionaries from inventorying existing information systems and data bases.

5. Establish policies and ensure procedures that provide a workable structure in which catalogued information is shared by system managers.

OTHER FUNCTIONS

1. Coordinate with ACSI to insure all aspects of information security are considered in IRM policy development and promulgation.

2. ISP recommended HQDA services under DIRM but it should be considered for inclusion under AUTOCOM.

3. Perform program budget director function.

4. Has responsibility for the communication function.

ACSIRM

ADVANTAGES:

1. Combines IRM functions (automation, communication and administration) under a single manager.

2. Allows for central information policy development, coordination, and promulgation.

3. Resolves turf issue.

4. Most IRM organizations including the Postal Service and IBM use a single manager concept.

DISADVANTAGES:

1. Major reorganization (154 spaces, 15 new and 139 transferred).

2. Perception of return to ACSAC.

3. Keeps automation and communication together at HQDA but separate in the field.

ANNEX E

DEPARTMENT OF THE ARMY
FY 1984
AUTOMATION
PRESIDENT'S BUDGET

(000)

	FY 82	FY 83	FY 84
1. CAPITAL INVESTMENT			
A. New Capacity	135.3	106.7	225.4
B. Existing Capacity	14.0	26.6	22.4
C. Software/Other Equipment	11.7	20.6	18.8
D. Site Construction	6.9	15.3	13.2
SUBTOTAL	168.9	168.8	280.0
2. PERSONNEL			
A Civilian Labor	378.6	399.8	413.7
B. Civilian Workyear	(15.0)	(15.4)	(15.9)
C. Civilian End-Strength	(15.0)	(15.5)	(16.0)
D Military Labor	96.3	118.0	133.2
E. Military Workyear	(4.6)	(5.6)	(6.3)
F. Military End-Strength	(4.7)	(5.8)	(6.4)
SUBTOTAL	475.0	517.8	546.9
3. RENTAL AND OTHER OPN			
A. Equipment	118.6	174.8	196.5
B. Space	6.7	7.2	7.5
C. Supplies and Other	68.4	76.5	76.4
(1) Supplies	(46.1)	(54.6)	(57.3)
(2) Other	(22.3)	(21.9)	(19.1)
D. Travel	15.1	19.3	21.4
SUBTOTAL	209.1	277.9	302.0
4. COMMERCIAL SERVICES			
A. ADPE Time	46.5	47.0	58.3
B. Leased Telecom Services	116.3	144.9	159.4
C. Operations	5.3	5.7	6.1
D. System Design Analysis/Prog	46.3	71.0	80.7
E. Equipment Maintenance	83.3	100.7	104.6
F. ADP Services, Studies, Other	70.4	126.6	151.3
SUBTOTAL	366.3	496.0	560.6

5. INTER-FED EXEC SERVICE			
A. Payment	7.5	5.4	5.6
B. Collection	-24.6	-35.6	-36.9
SUBTOTAL	-17.1	-30.2	-31.3
6. INTRA-ARMY SERVICES			
A. Payment	143.7	162.9	169.1
B. Collection	-143.7	-162.9	-169.1
SUBTOTAL	0	0	0
7. OTHER GOVT SERVICES			
A. Payment	.7	1.1	.9
B. Collection	-6.9	-10.0	-10.0
SUBTOTAL	-6.2	-8.9	-9.0
TOTALS			
Obligations	1,197.3	1,421.5	1,649.2
Workyears	(19.6)	(21.1)	(22.3)

All Figures to Nearest 100.   Totals May Not Be Correct.

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APPENDIX I to ANNEX E

SURVEY OF KEY HQDA AUTOMATED SYSTEMS SUPPORT

<u>DCSOPS</u>

<u>NAME</u>	<u>ACRONYM</u>
Structure and Composition System	SACS
Force Accounting System	FAS
Vertical Force Accounting System	VFAS
The Army Authorization Documents Systems	TAADS
Vertical, The Army Authorization Documents System	VTAADS
Basis of Issue Plan	BOIP
Force Planning Information System	FPIS
Force Development Integrated Management System	FORDIMS
World-wide Military Command and Control System	WWMCCS
Army Automation Planning, Programming, and Evaluation System	AAPPES
Army Training Requirements and Resources System	ATRRS
Training Management Control System	TMACS
Training Ammunition Management Information System	TAMIS

<u>DCSLOG</u>

Total Army Equipment Distribution Program	TAEDP
Strategic Mobility Information System	SMIS
Mechanization of Selected Transportation Movements	MECHTRAM

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Prepositioned Material Configured in Unit Sets	POMCUS
Transportation Automated Cost Repairing System	TACRS
Reporting of Transportation Discrepancies in Shipment	DISREP

DCSPER

NAME	ACRONYM
RETAIN	RETAIN
Recruit Quota System	REQUEST
Standard Civilian Management Information System	SCIPMIS
Standard Installation/Division Personnel System	SIDPERS
Armed Forces Examining and Entrance Station Reporting System	ARS
Forecasting Systems--Army Strength and Personnel Management Systems	FORECAST
Reception Station Automation	RESTAS

DCSRDA

Standardized Army Research, Development and Acquisition System	STARDAS
Modernized Army Research and Development Information System	MARDIS
System for Automation Material Plans Army Material	SAMPAM

COE

NAME	ACRONYM
Automated Military Construction Progress	AMPRS
COE Management Information System, Personnel Administration	COEMIS, PA

COE Management Information System, Finance and Accounting	COEMIS, F&A
COE Management Information System	COEMIS
Facilities Engineering Supply System	FESS
Integrated Facilities System	IFS
Housing Information Management System	HIMS
NIFM (Classified)	NIFM
Army Facilities Components System	AFCS
Contract Administration/Procurement Management Reporting System (CAPM II)	
Environmental Technical Information System	ETIS
Project Tracking System	PTS
DD Form 1391 Processor	
COE Program and Fund Distribution Control System	CEPFDCS
Directed Stationing System	DSS
Army Stationing and Installation Plan	ASIP
Army Space/Recruiting Space (COE/GSA provided)	IIS
Safety Mishap Information System	SMIS

COA

NAME	ACRONYM
Procurement Appropriation Program and Funds Control System/Army Customer Order Control System	PFCS/ACOCS
Joint Uniform Military Pay System--RC	JUMPS-RC
Non-appropriated Funds Information Standard System	NAFISS
Central Non-appropriated Funds Payroll System	CNPS
Departmental Accounting System	
Program and Funds Distribution Control System	PFDCS

Budget Execution Tracking System	BETS
Standard Army Civilian Pay System	STARCIPS
Joint Uniform Military Pay System--Retired	JUMPS (Retired)
Joint Uniform Military Pay System--Active	JUMPS--AA
Tactical Unit Financial Management Information System	TUFMIS
Standard Finance System	STANFINS
Standard Army Financial Inventory Accounting and Reporting System	STARFIARS

TAG

Military Automated Mail Accounting System	MAMAS
TAG Administrative System	TASS
Casualty Active Record System	CARS
Standard Army Publications System	STARPUBS
Retired Army Personnel System	RAPS
Army Requirement Control System	ARCS
NAF Financial Management System	
Army Nuclear Test Personnel Review	ANTPR
Resource Management Print-Order Automation	RMPAS
Publication Administrative Control Systems	PUBACS
Automated Army Information Book	AAIB
Casualty Information System	CIS
Veterans Educational Assistance Program	VEAP
Operations Management Information System	OPTIMIS
Publications Automated Index Locator System	PAILS

IG

IG Management Information and Reporting System	IGMIRS

<u>TSG</u>

In-patient Accounting System	IAS
Individual Patient Data System	IPDS
Budget Management Information System	BMIS
Army Medical Department Personnel Management System	AMEDDPMS
Interim Food Service System	IFSS
Food Service System	TRIFOOD
Automated Inventory, Distribution and Exchange	AIDE
Army Medical Department Property Accounting System	AMEDDPAS
Medical Stock Central System	MEDSTOC
Medical Logistics	MEDLOG

<u>OCAR</u>

<u>NAME</u>	<u>ACRONYM</u>
Army Reserve Management Information System	ARMIS
US Army Reserve Facilities Assets Catalog and Tracking System	FACTS

<u>NGB</u>

ARNG-MIS (Umbrella for all systems)	
ARNG-PRS (Personnel System)	
Unit Readiness	UNIREP
Standard Army Technician Payroll System	STARTEPS
National Guard Fiscal Accounting System	NAGFACTS
ARNG Facilities Inventory and Stationing Plan	ARNG-FISP
Base Operations Budget Management and Execution	BASEOPS

OASA (M&RA)

FORECAST

PAE

Program Budget System	PBS

OASA (AA)

Defense Wage System	DEWS
Army Discharge Review Board	ARDB
Procurement Reporting System	PREPS
Overseas Station Allowance System	OSAS
National Board for Promotion of Rifle Practice MIS	NBPRP
Congressional Inquiry Information System	CIIS
Public Affairs Management Information System	PAMIS
Administrative Space Management System	
Coordinators Automated System	CAS

APPENDIX II to ANNEX E

SURVEY OF KEY HQDA AUTOMATED SYSTEMS UNDER DEVELOPMENT

<u>DCSOPS</u>

NAME	ACRONYM
Vertical Force Development Management Information System	VFDMIS
Automated Shorthand Notes	ASHN
Force Structure Analysis System	FSAS
Force Management Impact Analysis System	FMIAS

<u>DCSPER</u>

Army Civilian Personnel System	ACPERS
Forecasting Systems--Army Strength and Personnel Management Data	FORECAST
Student/Trainee Management System	STRAMS
Standard Installation/Division Personnel System-3	SIDPERS-3
Reenlistment Training and Assignment Management System	RETAMS
Personnel Deployment and Distribution Management System	PERDDIMS

<u>DCSRADA</u>

Automation Material Plans-MOD	AMP-MOD

*Other Systems Are Under Development
 However, Input Was Not Received.

<u>COE</u>

NAME	ACRONYM
Housing Operation Management System	HOMES
Construction Appropriations Programming, Control and Execution System	HQ HOMES

Real Estate Management Information System	REMIS
Stationing Analysis Model	SAM
Facilities Engineering Job Estimating System	FEJE
Manpower Allocations and Requirement Model	MARM

COA

Program and Budget Accounting System	PBAS
Standard Finance System Redesign	STANFINS
Standard Army Civilian Pay System Redesign	STARCIPS
Redesign of Army Military Pay System	

TAG

Transit Time Information System for Military Mail	
Standard Installation/Division Personnel System--USAR	
Army Staff Automated Administrative Support System	ARSTADS
Army/ACE Registry System	AARTS
Army Continuing Education System	ACES
Army Micrographics Management System	AMMIS
Basic Skills Education Program	BSEP
Army Education Information System	AREIS

ANNEX F

BUSINESS SYSTEMS PLANNING CONCEPT

Business Systems Planning is a structured approach developed by IBM to assist an organization in establishing an Information Systems plan to satisfy its near and long-term information needs. It can be applied well to both the public and private sector, since their requirements for developing information systems are similar.

BSP is based on a conviction that the success of any organization-wide information system depends on:

    -- Obtaining executive commitment and involvement.

    -- Setting information system objectives that support those of the organization.

    -- Understanding the organization from the viewpoint of management.

    -- Adopting a top-down approach to <u>studying the business</u> (that is, working from the overall to the detail level) and a bottom-up approach to implementation.

    -- Creating a plan that is evolutionary, that is, one that builds from existing systems modularly to an integrated architecture.

    -- Putting in place those information management functions required to adequately manage the information systems resources.

    Appendix I   Implementation Flow
          II BSP Study Flow

APPENDIX I to ANNEX F

IMPLEMENTATION FLOW

CHART 1

Top-down Analysis with Bottom-up Implementation

APPENDIX II to ANNEX F

FLOW OF BSP STUDY

CHART 2

```
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Gaining the  │─────▶│ Preparing for│─────▶│  Starting    │
│ Commitment   │      │  the Study   │      │  the Study   │
└──────────────┘      └──────────────┘      └──────────────┘
                                                    │
                                                    ▼
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│  Analyzing   │      │  Defining    │      │  Defining    │
│Current Systems│◀────│ Data Classes │◀─────│ Organization │
│  Support     │      │              │      │  Processes   │
└──────────────┘      └──────────────┘      └──────────────┘
       │
       ▼
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Determines   │      │ Findings and │      │ Review Info  │
│ the Exel     │─────▶│ Conclusions  │─────▶│ Managements  │
│ Perspective  │      │              │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
                                                    │
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Define Info  │      │  Determine   │      │   Develop    │
│ Architecture │─────▶│  Priorities  │─────▶│Recommendations│
└──────────────┘      └──────────────┘      └──────────────┘

                  ╱────────────────╲
                 │    Report       │
                 │    Results      │
                  ╲──────────────╱
```

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