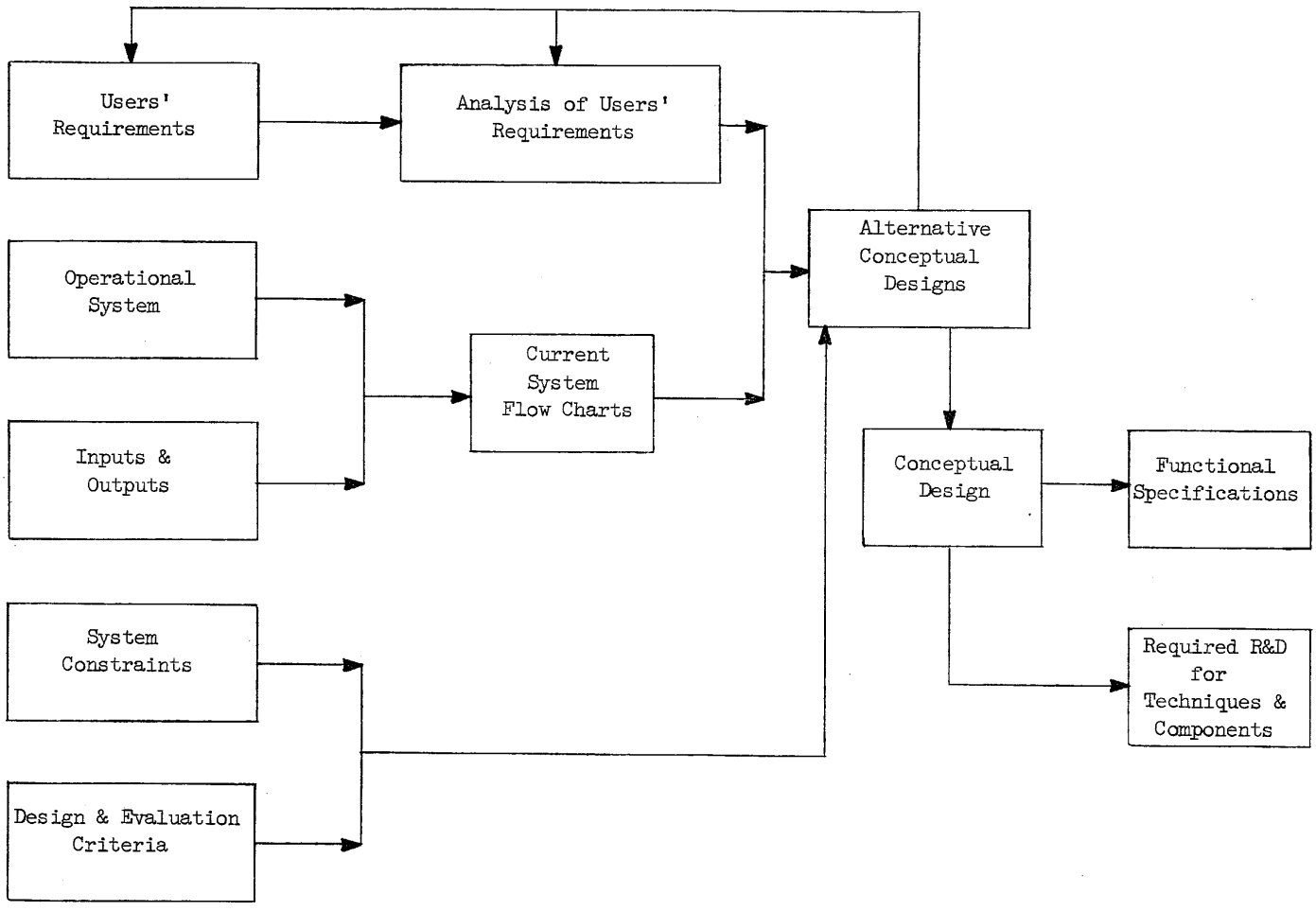
Attachment 1

SYSTEM DEVELOPMENT PHASE I



DECLASS REVIEW by NIMA/DOD

DATA COLLECTION FOR SYSTEM DEVELOPMENT - PHASE I

During the first two months of the Phase I Program, the contractor must obtain general information on Center organization and operations and comprehensive detailed data.

It is proposed that the above information be obtained as follows:

1. Short informal "blackboard" briefings to be given by Center managerial personnel and attended by the full complement of contractor program personnel (approximately 15 personnel including [redacted] STATINTL. These briefings should be provided during the first week and include the following content:

a. General description of Center organizational structure including functions and locations of organizational units.

b. General description of requirements levied on the data processing support system by users of the system. What are the needs, the use to which these needs are put, and for what purpose.

c. General description of input and output products identified with each Center organizational element. Define type, preparation, processing time, use, and flow through Center.

d. General description for each Center organizational unit of files, equipment, and communication facilities.

e. Describe any modifications to Center functions, products, equipment, procedures or product use now planned but not yet implemented.

f. General comments on Center and IPD problem areas, desired data processing support system performance objectives, and constraints on cost, size of

Center staff and facilities. These comments should pertain to both current and projected activities.

2. Following the general briefings a series of discussions will be held between the contractor and appropriate Center personnel to obtain information of the following nature.

a. Detailed description of IPD functions (who does what?).

b. Detailed description of requirements levied on the data processing support system by users of the system (needs, use, and purpose).

c. Detailed description of equipment. What processors, storage devices, input/output terminals, communications, etc. are employed? What is their configuration, physical and performance specifications, and function in the system?

d. Detailed description of files. What is the type, physical size, volume of data, code, format, content, organization, accuracy requirements, utility, and frequency of updating.

e. What are the procedures for arithmetic computations, data conversion, data storage, file updating, file purging, file indexing, file processing, file search, extraction and consolidation or correlation of data? Where are the bottlenecks? What are waiting times? How many personnel are involved in carrying out each activity?

f. Detailed descriptions of data flow. What is the sequence and path of events. What is the elapsed time for the performance of each event? What flexibility is required to process special or emergency requests?

g. Detailed description of computer programs operating or in preparation. On what computer does the program operate? What is number of instructions; running time; frequency of use; percentage of total computer use required by program; volume, form, and format of input data base; volume, form, and format of output; utilization of peripheral equipment? What programming languages are used? What documentation is available on program description, flow diagrams, operating instructions?

h. Detailed description of internal security constraints. What data, techniques, equipment, and products must be secure within IPD? What techniques are now used to maintain information security during flow into, through, and out of IPD?

i. Detailed description of backup procedures, equipment, and techniques.

3. IPD should assemble documentation for review by the Contractor. This should be done by contract start date to maximum possible degree. Contractor personnel not designated for discussion with Center personnel will be assigned to review this material in parallel with discussion groups. In general, any material (textual, graphical, pictorial, numerical) which supports or amplifies the information sought through briefings and discussions above is desirable.

Typical examples are as follows:

Procedure Manuals

Security Manual

Target Brief(s)

Target Folder(s)

Computer Running Log(s) - 1 month period

Computer Program Descriptions, Flow Diagrams, Program Operating Instructions

File Description(s), Organization, Content, Format, Codes, Indexing

Equipment and Facility Layouts

Organization Charts

Line Plot(s) and Drawings

Program Language(s)

Management Reports (Cost/Performance Data, Time Study Analyses)

Equipment Performance Characteristics

Flight Log(s) or Other Photo Identification Media

Information Awareness (if any)

Attach 2

6-05069-01

COLLECTION OF BASIC DATA FOR DESIGN OR IMPROVEMENT OF A DATA HANDLING SYSTEM

An initial step in the design or improvement of any system is the collection of certain basic data concerning the operation of the system, current and future inputs and outputs, and other factors which may not be available within the experience and normal technological resources of the design team. This report establishes the general and specific requirements for this type of information and presents a series of forms for the collection of these data, through interview and documentation investigation, which will:

1. Identify the data required in system design or improvement.

2. Permit the collection of data through interview of personnel, where necessary, with a minimum of interference to the normal operation of the system.

3. Insure the acquisition of information from the most appropriate source.

4. Establish the requirement for assumptions.

The forms concern the basic information required in a design effort directed at an entire system. In using these forms for a particular design effort, an initial evaluation should be made by both design team and systems personnel to determine the forms and entries which are applicable to that particular effort. For example, time or economic limitations may restrict the effort to a particular portion of a data handling system. Security may preclude access to certain basic information. Or the simplicity or experience in a given area may negate the requirement for initial analyses. These limitations on the design effort should be defined at the earliest possible time. In addition, the form of entry in a given position on a form is, in some cases, subject to variation with different types of data handling systems. Standard entries can be defined after a general familiarity with the operation of the system is achieved by the design team.

A flow chart of the acquisition and development of data during the design process is provided to illustrate the necessity for collection of the general types of data concerning the system. It will be noted that the basic data is employed as input to analyses which develop certain other data, and that the resulting data is employed in further analyses in an iterative process. The diagram omits the feedback loops which may cause reanalysis in previous steps under an assumption that the data developed in any analysis step is the end result. Further, this diagram omits the input of technological data within the resources of the personnel of the design team. However, the effect of a lack of basic data concerning the system on the design effort can be predicted by the following flow pattern.

The forms provided list the elements of essential information. Instructions on the back of each form state the desired type of entry to be

made in each column. In addition, an expansion of the initial analysis in which these data are to be employed is given to illustrate the specific use of the data for further clarification of the entry format, and for use in the initial evaluation of the applicability in a particular design effort.

STATINTL

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