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M A N U A L
FOR THE OPERATION OF THE
ADC INDICATIONS BOARD

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Office of
THE DEPUTY CHIEF OF STAFF FOR INTELLIGENCE
HEADQUARTERS, AIR DEFENSE COMMAND

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AIR DEFENSE COMMANDFOREWORD

This is a time of uneasy peace and constant threat of war. In such a time, the Essential Elements of Information -- WHO? WITH WHAT? WHEN? FROM WHENCE? and TO WHERE? -- assume a position of paramount importance to the Commander charged with the responsibility for defensive action against surprise air attack.

These particular EEI, in turn, are the inheritance of the intelligence officer. They become his business; they are the essential reason for his professional being.

In the present case, WHO is self-announced; WITH WHAT is, in general terms, self-evident; FROM WHENCE can be reasonably deduced, but WHEN and TO WHERE remain the great imponderables. The "Indications Board" is an endeavor to solve an approach to the problem of WHEN.

Any consideration of WHEN involves, of necessity, constant evaluation of the indications of the imminence of open hostilities, as well as of hostile air attack upon the United States. From its inception, such evaluation is beset by difficulties which are possibly unique in the history of modern warfare. These difficulties, in themselves, are the product of Communist dogma, philosophy and approach to world dominion. They work to Soviet advantage; they are real difficulties. The massing of troops in critical border areas; the movement of air units or naval vessels; the stockpiling of supplies; sharp diplomatic exchanges -- these once classical indications of an increasing capability and their constant employment by the USSR has created a permanent condition of political and military tension which finds its best expression in the preface of the Intelligence Advisory Committee's Weekly Watch Committee Report:

"The mission of the Watch Committee is to collect, evaluate, analyze and report indications of Soviet-Communist intentions of hostile action. In analyzing current indications, the Watch Committee recognizes that the Soviet Armed Forces in being are in an advanced state of readiness for war and are capable of initiating offensive operations with little or no warning."

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*This is
Project Blind 4/1/50
JMM*

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This statement is at once a succinct acknowledgement of the degree of success of Soviet deception and a definition of the very core of the problem of WHEN?

It is to this problem and its attendant inspired and built-in difficulties that DI, ADC has applied the methodology discussed in this manual.

THEORY AND DEVELOPMENT OF THE INDICATIONS SYSTEM

The Commander, Air Defense Command, has assigned high priority to the essential element of information WHEN. Therefore, the processing of intelligence items pertaining to indications thereof becomes a critical ADC intelligence activity. It is a highly complex intelligence activity and conducted on a continuous basis. It is a permanent activity.

Processing these intelligence items is intelligence production for a specific purpose. The production of intelligence is not an exact science. It cannot be. Intelligence is produced from basic information and fragmentary intelligence items derived from dynamic situations which are constantly subject to change. A chronic lack of completeness requires a continual application of reasoning; inductive, deductive and intuitive. An answer is necessary. Therefore, the final product is formed on the basis of logic and depends, inescapably, on the degree of perceptiveness of the individual or group involved.

In practice, then, intelligence production is permanently confronted by the perplexity of fragmentary intelligence items and the hazards of human error. The factor of time alone--urgency--forces the final product to be derived from knowledgeable interpolation of the available fragmentary intelligence items applicable to the problem. Any mechanical device which can serve to reduce these hazards is, therefore, to be sought and developed. In fact, all major human enterprises are confronted by the need for control of the items they deal in and for the elimination or lessening of human error. Devices such as check lists, stock lists, inventories, filing systems, charts, graphs, visual illustration, are all forms of control, all designed to eliminate guesswork and human error.

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Intelligence items are usually controlled by elaborate filing systems and indexes which act as references to reports which are habitually filed out of sight and frequently out of mind. Visual assistance is rendered by bar graphs, pie charts, animated maps and graphic presentations of rows of little men, machines, dollar marks, shocks of wheat or stacks of ingots. All of these devices, when applied to the problem of evaluating the indications of hostile air attack upon the United States, assist in understanding an individual indication. They do, however, fall far short of meeting the requirements of the problem as a whole. They fail to insure continuity of thought and action. They do not create a composite picture. They do not indicate general or specific trends in readily apparent terms. They do not present the inter-relationships of the indications in reference to time on the basis of a continuum. They do not serve as a mechanical memory. In the final analysis, they are nothing more than shocks of corn.

In approaching the specific problem of controlling and analyzing the indications of WHEN, it must not only be remembered that they are a highly complex set of factors, but that they must be presented in such a manner that a hypothesis can be formed for both purposes of projection and anticipation of required intelligence and command action. If this is not accomplished, the indications will have failed in practice the basic principles upon which they are established--in this case--prevention of strategic surprise and preservation of the security of the United States against hostile air attack.

In establishing a workable system of visual control and analysis of the indications of WHEN, DCS/I, ADC approached the problem on the basis of the following criteria:

- a. The indications must be valid.
- b. The system must employ graphic presentation in a simple and readily understandable manner.
- c. The dynamics of the quantitative and qualitative degrees of the individual indications must:
 - (1) Be presented in terms of evaluation and relative importance.
 - (2) Be presented in relation to time on the basis of a continuum.

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- (3) Be presented both individually and in relation to all other indications.
- d. The system must provide:
 - (1) A key to the success or failure of the collection effort pertaining to a given indication.
 - (2) A mechanical "memory" in depth.
 - (3) A ready reference index to the evaluated intelligence items applied to each indication.
- e. The system of visual control and analysis must present its product with a degree of accuracy that will indicate the need for further intelligence and command action before that need arises.
- f. It must serve, in effect, as a daily visual supplement to the current Estimate of the Situation.

In order to satisfy the physical requirements of these criteria, DCS/I, ADC has procured and modified a commercial device known as the Productrol Board. This system is widely employed in industry for purposes of production and inventory control. With proper modification of a minor nature this device will accommodate 100 indications. It will graphically reflect in terms of color the evaluation given to intelligence items affecting each indication. It will maintain the specific evaluation as long as required and will portray it in relationship to all other indications. It will accurately portray trends and provide a basis for projection and anticipation of both intelligence and command action.

DESCRIPTION OF THE PRODUCTROL BOARD
 AS MODIFIED FOR INTELLIGENCE PURPOSES

The basic Productrol Board is a mechanical device used commercially for projecting images of vital facts from current records, and to provide a visual portrayal of values of performance against planned action, forecasts or requirements. It is selected for use in the Indications problem because it presents three basic elements that are completely missing in the ordinary record system--action in relation to time, visually portrayed.

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The Board consists of two essential parts encased in a single frame; the record panel and the chart or peg hole section.

The record panel provides 100 individual index pockets capable of accommodating standard 5" x 8" record cards. The pockets are arranged in vertical order on the record panel which is affixed to the left hand side of the second part of the Board.

The chart, or peg hole, section accommodates a title panel and a chart section. The entire chart section is composed of precision drilled peg holes. A double row of these holes extends in horizontal order from the record section on the left to the edge of the chart on the right. Each double row of peg holes is a horizontal extension of an individual index pocket in the record section and is numbered in accordance with the number of the index pocket. In the vertical order, each single row of peg holes is an extension of a calendar date posted at the top of the chart section.

This basic device provides a reference to 100 subjects filed in the index pockets of the record panel and the relationship of each of these subjects to time. This relationship is recorded by means of signal pegs of various colors which are inserted as applicable in the proper peg hole in the chart section. Thus, in industry, when a step in an operation or an order is filed in the index pocket, or is scheduled to be completed by a certain date, a colored signal peg is placed in the vertical date column pertaining to that order. This reference is further supplemented by a flow tab which is employed to indicate progress or supplemental information. By combining the record panel and chart section with signal pegs and flow tabs, action is visually portrayed in relation to time.

The attached photograph (Incl 3) shows the Board in use as an Indications Board.

This Board provides accommodation for 100 Indications of the imminence of hostile air attack upon the United States, and space for filing data pertinent to each Indication. It permits time to be portrayed on the basis of a continuum of six months by days; provides an area for current postings as well as cumulative postings; and provides an administrative section for the Intelligence collection effort.

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PRACTICAL APPLICATION

In making practical application of the theory, the initial step consisted of developing a valid set of indications specifically derived from the single EEI of "WHEN will the Soviet Union launch an air attack upon the United States?" These indications in order of importance are classified either as Direct--that is, indications directly affecting the capability or intention of the USSR to conduct air attack on the United States, or Indirect--that is, indications of strategic support to an air attack on the United States or of general hostilities which would probably be accompanied by air attack on the United States.

The color scheme selected to indicate the qualitative evaluation--the critical degree of development--of a given indication is derived in part from the color references to the state of alert in the Air Defense Command. These colors were selected in the belief that they are familiar in terms of degree of alert to officers of all Armed Forces and are applicable to this problem in terms of immediate association. This color code is as follows:

- BLACK
(Applied to flow tab only)
- An evaluation that conditions pertaining to this specific indication are: neutral, that is, neither favorable nor unfavorable to immediate air attack upon the United States or to strategic support thereof; or, no intelligence is available.
- WHITE
- An evaluation that conditions pertaining to this specific indication are unfavorable to hostile air attack upon the United States, or strategic support thereof.
- YELLOW
- An evaluation that some of the conditions pertaining to this specific indication for immediate attack upon the United States or strategic support thereof have been accomplished and progress on others is indicated.
- RED
(Light)
- An evaluation that most conditions pertaining to this specific indication, for immediate air attack upon the United States, or strategic support thereof, have probably been met and the balance may have been.

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(dark)

An evaluation that all conditions pertaining to this specific indication for immediate air attack upon the United States, or strategic support thereof, have probably been met.

BLUE

For administrative purposes only. A blue signal peg will be inserted in the first column in the chart section whenever it becomes apparent that a collection problem exists for a specific indicator.

a. In order to present the dynamics inherent in the indications, the quantitative and qualitative degrees of the individual indications are presented as follows:

Information, intelligence and other data pertinent to the individual indication is examined upon receipt and evaluated in terms of its relation to specific indication. This data is then transposed to a specific form, and a color value in terms of the color code is assigned to it. A signal peg of this color is placed in the proper chronological peg hole under "Current Week" and the data card is placed in its chronological order in an "Indications File." The index to this file is keyed numerically to the indications and provides immediate access to the specific data.

b. In order to present this evaluation in relation to time on the basis of a continuum, the signal pegs indicating evaluated information are posted daily in a "Current Week" column. At the end of the week after final approval the signal pegs are transposed in their daily order from the "Current Week" column to their proper chronological order in the main chart section. Thus, as the process of evaluation continues week by week, the varying degrees of evaluation indicated by the varying colors of the signal pegs are presented for immediate inspection on the basis of a continuum in terms of days. In this manner trends are graphically illustrated. Attention is thus directed to changes in the status of the indications and in their inter-relationships.

c. In order to control and further present the status of individual indications and their inter-relationships the flow tab is employed. Once the signal pegs under the "Current Week" column have been transposed to the main chart section, the "Current Week" data is examined and evaluated in terms of its relationship to previously evaluated data. Once the final weekly evaluation has been established,

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the flow tab is assigned a color value in accordance with the color code. The flow tabs of all indications are then inserted in the chronological column in the Chart Section, signifying the end of the current week. (See Incl 3) In this manner, current overall evaluation of all available data on each indication is presented in boldly graphic terms. The status of individual indications is accented, and inter-relationships become evident. The weekly postings on the flow tab are transposed to a Weekly Flow Tab record chart (See Incl 3) and permanently portray the trend of weekly evaluation. A written summary of the current overall evaluation for each indication is maintained in the index pockets of the record panel.

The system provides a very definite key to the success or failure of the collection effort pertaining to each specific indication. This is indicated by the application of black to the flow tab only, and by the absence of the signal pegs which indicate the presence of evaluated data pertaining to each indication. When intelligence data is completely lacking or extremely sparse or otherwise unsatisfactory, a blue signal peg will be inserted and remains in the Administrative Column (the first column in the chart section) until administrative action is taken to correct the collection effort pertaining to that indication.

The posting of these signal pegs in the main chart section and the chronological filing of the intelligence data in the index file provides an immediately available mechanical "memory" to any desired depth up to six months, and a ready reference index to the individual evaluated intelligence items and weekly summaries of evaluation applied to each indication.

This system, because it presents graphically an accurate, immediately available, current evaluation of the indications pertaining to the EEI of WHEN, acts in effect as a daily visual supplement to the current estimate of the situation insofar as that EEI is concerned, and provides a basis for projection and anticipation of Intelligence and Command action.

DCS/I, ADC employs the following SOP in operating the Indications Board.

INDICATIONS -- S.O.P.

1. The Indications Board is maintained on a daily basis by the DCS/I Duty Officer (hereafter Duty Officer).

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2. The Duty Officer examines and evaluates the intelligence received in the daily intelligence flow and registers his evaluation in accordance with the color code. Registration is accomplished by insertion of signal pegs in the peg holes found under the "Current Week" column in the extreme right hand side of the Board.

3. The Duty Officer maintains a written daily record of his evaluation and the posting received by given indications. This record includes the brief of the report, the date, the indication number, the evaluation given in terms of color, notes on the officer's basic reason for the evaluation given and the name of the Duty Officer concerned. This data is maintained chronologically by indication number in the current week's indication card index file. It may be maintained in pencil or pen.

4. An Evaluation Committee, consisting of the Deputy Chief of Staff for Intelligence, Director of Studies and Estimates, Duty Officer and such others as may be designated, meets weekly on the last regular working day of the week. This Committee considers and finalizes the evaluation of individual reports as established by the Duty Officers. The Duty Officer acts as recorder for the Committee and posts the Committee's evaluation in final form on the Indications Board. This Committee also establishes the overall status of each indicator on a weekly basis and changes the summary in the index card holder when necessary.

a. The applicable intelligence reports and the daily notes maintained by the Duty Officers provide the basis for study by the approving committee. Exceptions taken by the committee to registrations of specific indications are noted by the Duty Officer. These exceptions are provided to all of the Duty Officers for their study and guidance.

b. It will be the responsibility of the Directors of Collection and Dissemination and Research and Evaluation to provide the Evaluation Committee with a weekly positive or negative report on their Indications activities. This report will be available to the Committee when it meets to finalize the weekly postings.

5. The Duty Officer on duty is continuously prepared to brief key members of the Air Defense Command Staff having access to the Board on current evaluations of the indications and the reasons therefor.

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CLASSIFICATION Changed from
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AUTH: Comdr, ADE
20 Aug 53 [Signature]
(Date) (Signature)

BASE ELECTRON SYSTEMS
INT AIR FORCE CASE
COLORADO SPRINGS, COLORADO