

~~SECRET~~TRAFFIC ANALYSIS RESEARCH1. Analysis of Discriminants

As new discriminants were observed at SSA, this group studied them to determine their function, use, relative importance, and echelon from external characteristics. Through close liaison with the cryptographic intelligence unit, information from that source was constantly being related to the purely external. At regular intervals, studies were conducted on already established systems so that current records of all known J/A cryptographic systems were maintained at all times. Especially complete records were maintained on one time pads as these were found to be particularly valuable from the standpoint of direct T/A intelligence.

This group also conducted studies on dummy traffic and other miscellaneous traffic types when necessary.

B-IV

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TRAFFIC ANALYSIS RESEARCH

2. DD Research

The function of this group was primarily the identification of DD numbers and the establishment of the validity of identifications. All methods of identifying DD's, including T/A cribs, short time lapses, etc. were used, but special emphasis was placed on methods which exploited available ultra material, notably **Ate** and Dendai Order of Battle cribs.

The secondary function was the cryptanalytic solution of the DD systems themselves as an aid to further identifications.

~~SECRET~~TRAFFIC ANALYSIS RESEARCH3. NR Studies

Studies were made of the NR patterns used by Japanese Army Headquarters. When more than one pattern was found at a location, these patterns were related to specific originators through a study of Dendais. These studies were used for drawing inference by the T/A area organization and for cribbing originators by the military cryptanalytic branch.

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TRAFFIC ANALYSIS RESEARCH

4. Call Sign Analysis

This group was responsible for the isolation and cryptanalytic solution of the various systems used by the Japanese for the allocation of call signs. The reconstructed allocation charts were used by the net reconstruction unit for the identification of nets and circuits.

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*Key card*

*For picture:*  
*#13*

STATION PERFORMANCE AND CONTROL

1. Intercept Facilities

MS-2 Petaluma, Cal. (SSA)	MS-15 Ft. Lewis, Wash. (WDC)
MS-5 Honolulu, T. H. (SSA)	MS-19 Anchorage, Alaska
MS-6 Amchitka, Alaska (SSA)	(Alaskan Dept)
MS-8 New Delhi, India (SSA)	MS-20 Guam (POA)
MS-11 Guam (SSA)	MS-21 Honolulu (POA)

Daily station activity reports were received from the above stations and from these coverage results were determined; assignment changes were also made on the basis of these daily reports. Intercept missions were assigned directly by SSA to these stations.

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*Key Cards*

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*# 26*

STATION PERFORMANCE AND CONTROL2. Liaison with Allied Centers

WEC New Delhi, India - Station 94  
CB San Miguel, Luzon - Stations 25, 26, 30, 40 and 95

Circuit coverage was coordinated by SSA; certain nets located in the particular area of interest to the center were covered exclusively by that center. Other circuits monitored were those which met their individual needs. Coverage statistics were supplied to SSA and these were incorporated into the weekly coverage summary which included totals of all intercept sources devoted to Jap Army.

PL 86-36/50 USC 3605  
EO 3.3(h)(2)



STATION PERFORMANCE AND CONTROL

Liaison with Theatre Commands

POA	Honolulu, T. H. - Stations 20, 21, 27
IBT	Kunming, China - Stations 37, 38, 39
WDC	Presidio, San Francisco - Station 15
AFFAC	San Miguel, Luzon (See Central Bureau)
Alaskan Dept	Anchorage, Alaska, Station 19

In all cases except IBT, assignments were made directly by SSA. In the case of IBT, a block assignment was made and individual circuits assigned by theatre headquarters to the intercept stations.

STATION PERFORMANCE AND CONTROL

3 ~~2~~ Directives to Stations

Included all stations listed under section 1. Allied centers and theatre commands were contacted when specific requests were made of any particular station under their control.

STATION PERFORMANCE AND CONTROL2. Information to Stations

Sent to all units listed under sections 1, 2 and 3. Circuit information was radioed daily to each unit so that station records were completely current.

STATION PERFORMANCE AND CONTROL⊗ Circuit priorities

Needs of cryptanalysis, traffic analysis and intelligence were weighed and individual circuit priority then determined. Circuit was then assigned for coverage based on its priority classification.

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STATION PERFORMANCE AND CONTROL

4 ~~es~~ Case book file

A master file was maintained on all known Jap Army circuits including latest information on locations and validity, tsu range, frequencies, call signs and validity.

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STATION PERFORMANCE AND CONTROL

Other files

- a. Station assignments - current
- b. Station assignments - historical
- c. Circuit histories
- d. Common transmitters
- e. Geographical case book listing
- f. Predominant discriminant over each circuit
- g. Schedules
- h. WEC and CB assignments

STATION PERFORMANCE AND CONTROL

Coverage reports

These reports were based on tsu sheets prepared by net personnel. Each circuit was listed and messages intercepted compared with messages sent to arrive at an efficiency of coverage percentage figure.

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Key Cards

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NET RECONSTRUCTION AND INTELLIGENCE

NETS

1. Circuit Analysis

Analysis of traffic available at this center, together with daily reports from intercept stations and foreign centers made possible daily changes in circuit listings. Since nets are established for communication within specific army units, correlation with order of battle was constantly checked.

B IV

NET RECONSTRUCTION AND INTELLIGENCENETSReading Operator Chatter

All chatter copied on Japanese circuits was submitted on continuous teletype rolls, containing also all traffic sent in proper order. Many security breaks were noted in plaintext, giving clues as to unit dispositions and other valuable intelligence.

NET RECONSTRUCTION AND INTELLIGENCE

NETS

2 ~~3~~ Field Traffic Analysis Liaison

In addition to disseminating reports from intercept stations, this section prepared daily comments on field analysis reports, which were relayed by teletype and radio to the stations concerned.

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NET RECONSTRUCTION AND INTELLIGENCE

NETS

3 Maintaining Schedule and Coverage Records

Analysts maintained weekly records showing activity on each circuit by amount of traffic sent and schedules.

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NET RECONSTRUCTION AND INTELLIGENCENETS3. ~~4~~ Deriving of Net Intelligence

Daily reports were prepared giving possible interpretations of net changes in terms of Order of Battle. Net analysts assisted in work by maintaining records of contacts on circuits.

NET RECONSTRUCTION AND INTELLIGENCE

D/F

4 Direction Finding Unit

Many bearings were taken on frequencies unlocated by traffic analysis, the results being correlated by this unit. Confirmation of other analysis was also made possible.

NET RECONSTRUCTION AND INTELLIGENCE

D/F

~~VS~~ "TINA"

During the course of this section's activity, 26 Japanese radio operators were identified and cataloged according to individual characteristics as recorded on tape. This technique was particularly applicable to low echelon traffic analysis.