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HISTORY AIR TECHNICAL INTELLIGENCE CENTER

JUNE 1951 - 31 DECEMBER 1951

AIR TECHNICAL INTELLIGENCE CENTER
WRIGHT-PATTERSON AIR FORCE BASE
DAYTON, OHIO

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Wright-Patterson Air Force Base
Dayton, Ohio

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HISTORY OF
AIR TECHNICAL INTELLIGENCE CENTER
FOR THE PERIOD
1 June 1951* -- 31 December 1951

Author ?

* Effective date of assignment to Headquarters ^{Command,} United States Air Force
per General Order ^{No.} 31, Headquarters United States Air Force, dated
1 June 1951. See Appendix 1.

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Col P. L. Dunn

DATE: 20 February 1952

SECURITY INFORMATION

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FOREWORD
TO THE HISTORY OF
AIR TECHNICAL INTELLIGENCE CENTER
FOR THE PERIOD
1 July 1951 - 31 December 1951

The Air Technical Intelligence Center was officially designated as such by General Order Number 31, Headquarters, United States Air Force, dated 1 June 1951¹, which made the effective date of this designation retroactive to 21 May 1951, and defined the mission of the Center as follows:

"The mission of the Air Technical Intelligence Center is to produce Air Technical and Scientific Intelligence under the operational control of the Directorate of Intelligence, Deputy Chief of Staff, Operations, Headquarters USAF."²

Prior to the date of the official designation cited above, responsibility for the production of air technical intelligence had been delegated to the Intelligence Department of the Air Materiel Command. Since this Department was providing air technical intelligence not

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1. See Appendix 1.
 2. Ibid.

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only for AMC but also for the Air Research and Development Command and other components of the USAF, it was deemed advisable to place the Center directly under ^{the Directorate of Intelligence,} Headquarters, USAF, that it might better serve the United States Air Force as a whole.

To carry out its mission the Center focuses its efforts on these two objectives: (1) prevention of technological surprise from any foreign source; and (2) assisting the research and development agencies of the USAF in the development of countermeasures against such foreign technical development.

In the history to follow, the organization and functions of the Center and its subdivisions will be first described, and then the accomplishment of these various components during this reporting period will be summarized. For purposes of better organization of the information at hand, therefore, this history has been divided into the following two main subdivisions:

1. Organization and functions of the Center
2. Accomplishments for this reporting period

ORGANIZATION AND FUNCTIONS

The Air Technical Intelligence Center's activities cover four principal functions:

1. The support functions of command and administration.
2. Collection of technical intelligence information, including foreign aeronautical and related equipment required for the production of technical intelligence.
3. The analysis and evaluation of technical intelligence information.
4. Provision of logistical-type services to support the Center's various activities. This includes the reception, processing and storage of documents; limited services for reproduction of documents; publication of intelligence reports and studies; and specialized training of selected personnel performing air technical intelligence duties.

To perform these functions, the Center has been organized as indicated on the Organizational Chart attached hereto. ³ It will be noted that, in addition to the various staff offices shown thereon, the following three main divisions have been established:

1. Technical Requirements Division,

3. See Appendix 2.

2. Technical Analysis Division,
3. Technical Services Division.

The three divisions and the staff offices of the Center were established to accomplish the specific functions assigned within the four areas of activity outlined above. A further breakdown of the functions has been made within the divisions and staff offices to accomplish special tasks. Particular attention was paid, during the planning of the organization, to the problem of avoiding duplication of effort.

Detailed functions of the various components of the Center are outlined below:

OFFICE OF THE COMMANDING OFFICER, ATIC
FRANK L. DURN, COLONEL, USAF, COMMANDING

MISSION: To accomplish the Air Technical Intelligence phases of the overall mission of the Directorate of Intelligence, Headquarters USAF, as follows:

1. Provide air technical and scientific intelligence services for the USAF as required to prevent technological surprise from any source.
2. Produce air technical and scientific intelligence studies and estimates of alien capabilities to conduct air warfare.
3. Provide basic data on foreign air weapons and related materiel necessary to the preparation of recognition manuals and per-

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formance handbooks.

4. Nominate, indoctrinate, train, and provide technical guidance for Air Technical Liaison Officers (ATLO's) as required for the Air Attache System.
5. Nominate, indoctrinate, train, and provide operational and technical guidance for ATLO's as required for various overseas commands.
6. Conduct technical orientation and specialized training of attache personnel prior to departure for foreign duty.
7. Indoctrinate selected Air Force personnel in the techniques necessary to conduct air technical and scientific intelligence operations in the field.
8. Investigate and analyze reports of unidentified aerial objects, or of phenomena of possible concern to the air defense of the United States.
9. Provide administrative services for the Wright Air Development Center and the Air Materiel Command for the foreign scientists' program.
10. Provide air intelligence for the Air Materiel Command, Wright Air Development Center, and certain components of the Air Research and Development Command. The Air Technical Intelligence Center operates the AMC Air Room, and furnishes the usual intelligence services needed by AMC. The Center also furnishes intelligence briefing

services to the Commanding General and staff of the Wright Air Development Center upon request.

11. Disseminate intelligence information concerning foreign air technological and scientific developments required by the USAF research and development program.

12. Provide Directorate of Intelligence representation on Air Force and Joint boards and committees concerned with technical or scientific intelligence as required.

13. Establish requirements for air technical intelligence information, data and materiel; provide technical guidance to collection agencies.

14. Participate in certain phases of the domestic exploitation program of other intelligence agencies as directed.

15. Provide limited translation services for the Directorate of Intelligence, Headquarters, USAF, Wright Air Development Center, the Central Air Documents Office, and Headquarters, AMC, upon request.

16. Effect necessary administration, logistics, funding and coordination with concerned agencies for accomplishment of the assigned mission of the Center.

There are six staff offices directly subordinate to the Office of the Commanding Officer, Air Technical Intelligence Center, which perform certain command, administrative and housekeeping functions for this

organization. These are listed below, together with a resume of each staff office's function.

Air Inspector's Office - Chief, Lt Col J. P. Gentry, Jr.

Functions of this office are:

1. To keep the Commanding Officer informed of the tactical, logistical and administrative efficiency of the Center.
2. To advise the Commanding Officer on all matters pertaining to the efficiency and accomplishments of the Center.
3. To keep the Commanding Officer advised on the state of morale and welfare matters, as they pertain to the military and civilian personnel employed by the Center.
4. To conduct periodic inspections of the Center, and to make special investigations of matters when necessary.
5. To conduct personnel conferences for military and civilian personnel assigned to the Center.
6. To review and analyze inspection reports, board proceedings, policies, office instructions, and other miscellaneous correspondence and directives, and to keep the Commanding Officer advised concerning their implementation.

Scientific Advisor's Office - Chief, Mr. A. F. Arcier

Functions of this office are:

1. To advise and counsel the Commanding Officer relative to the scientific aspects and technical competence of the Air Technical Intelligence Program.

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2. To insure complete coordination and integration of Air Technical Intelligence Center activities with other USAF programs related to the offensive and defensive capabilities of the Air potential of the United States.

3. To assure the Commanding Officer that Air Technical Intelligence production meets the requirements of all using agencies.

4. To coordinate and recommend disposition action in connection with produced Air Technical Intelligence studies and reports.

Air Intelligence Office - Chief, Major Spencer Whedon

Functions of this office are:

1. To perform normal A-2 functions, conducting oral briefings and preparing written reports on strategic, tactical and technical intelligence for Commanding Generals and Staff Officers of the Air Materiel Command and the Wright Air Development Center.

2. To prepare all visual aids essential to the oral briefings.

3. To prepare special intelligence reports for components of AMC, WADC, and for other major Commands of the USAF.

Comptroller's Office - Comptroller, Lt Col A. E. McKenzie

The functions of this office are:

1. To advise and assist the Commanding Officer, and operating staff in developing and executing plans and programs to insure accomplishment of Air Technical Intelligence Center objectives, uniformity of operations, and effective utilization of manpower, funds and materials.

2. To supervise budget and fiscal matters with respect to

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fiscal policies, procedures, records, and reports to insure compliance with AF regulations and instructions.

3. To advise the Commanding Officer of the current status of funds, the effectiveness and administration of financial programs, and other budget and fiscal matters.

4. To direct and conduct continuing studies within the Air Technical Intelligence Center in order to recommend policy governing organization, manning methods, and procedures.

Subordinate to the Comptroller's Office are the following sections:

- a. Management Analysis Section - makes continuing studies of Air Technical Intelligence Center's functional organization, operational methods and procedures, and utilization of manpower and resources.
- b. Budget and Fiscal Section - exercises technical control, programming and administration of all funds allotted to the Air Technical Intelligence Center.

Personnel and Administration Office - Chief, Major K. M. Powell

The functions of this office are:

1. To advise the Commanding Officer of the Air Technical Intelligence Center on matters concerning the current status of the personnel and administrative practices and policies of the Center.

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2. To supervise and allocate the work requirements of the Personnel and Administration Office and its subordinate units.

Subordinate to the Personnel and Administration Office are the following Sections:

- a. Air Adjutant General Section - performs the AG functions for the Center, including publication of official directives, authentication of travel requests and other official documents, establishment and implementation of the Center's security policy, monitoring of correspondence control procedures, and advising the Commanding Officer on matters of protocol.
- b. Military Personnel Section - supervises the administration of matters involving military personnel, and maintains all military personnel records for the Center.
- c. Civilian Personnel Section - performs the functions necessary for the employment and administration of civilian personnel.

1126th Air Intelligence Service Squadron - Capt W. H. Arnstein,
Commanding

The functions of this organization are:

1. To provide air technical intelligence training for

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selected personnel to meet the requirements of certain overseas and Zone of Interior commands for field collection teams.

2. To perform all administrative functions normal to a squadron with the exception of maintaining personnel records.

TECHNICAL REQUIREMENTS DIVISION

Chief, Colonel M. D. Seashore

The functions of this division are:

1. To organize and operate the Collection Control Section and the Air Technical Liaison Program Section for the purpose of producing air technical intelligence.

2. To monitor and to operate the Air Technical Liaison Officer Program.

3. To establish and monitor air technical collection requirements with all Air Force and associated collection activities, United States and allied.

4. To monitor and operate the foreign scientist program.

5. To participate in certain phases of the domestic exploitation program.

6. To maintain direct liaison with Air Force activities and other governmental agencies in matters pertaining to air technical intelligence.

Sections charged with the performance of the functions under the supervision of the Technical Requirements Division are as follows:

a. Collection Planning Office - analyzes existing

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processes for the collection of intelligence information. To accomplish this analysis, the office interviews intelligence analysts to determine if they are receiving the types and quantities of information in which they are interested. This office also surveys both foreign and domestic intelligence documents for the purpose of collecting such information as the Center requires.

- b. Collection Control Section - receives, analyzes, implements and monitors plans generated by the Collection Planning Office of Technical Requirements Division. This section also directs and supervises collection requests through specific "Requests for Information" to authorized collection agencies.

These branches support the Collection Control Section:

- (1) Requirements Branch - receives, reviews and acts upon all specific requests for air technical intelligence information and materiel. These requests are reviewed for duplication or similarity to previous or currently active requirements, coordinated with the initiator, and cancelled when the requirement has been satisfied.

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(2) Operations Branch - receives collection plans from Collection Planning Office, and reviews such plans to determine participating agencies, areas of collection activity, personnel requirements, and funds required. By coordinating with participating agencies, this branch develops the collection plans into an operable collection program.

c. Air Technical Liaison Program Section - receives, processes and acts upon application for Air Technical Liaison duty, in accordance with AF Regulation 36-43. This processing entails the monitoring of overseas movement of all individuals assigned to the Air Technical Liaison Officer program and determination of locality and specialty requirements for Air Technical Liaison personnel, including Air Technical Liaison Officers, selected stenographic personnel, qualified airmen linguists, technical intelligence technicians, administrative supervisors and senior clerks.

These branches support the Air Technical Liaison Program

Section:

(1) Processing Branch - locates, selects, trains, assigns, moves and monitors qualified military personnel, civilian scientists, civilian specialists and secretarial personnel for Air Technical Intelligence service overseas.

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(2) Foreign Activities Branch - promotes free exchange of information and assistance between the Air Technical Liaison Offices overseas, Air Attache Offices which have ATL personnel assigned, and the Air Technical Intelligence Center, through the interchange of correspondence, reports and periodic journals.

d. Foreign Scientists Section - administers the program of foreign nationals participating in Project "Paperclip".⁴ These duties include proper security control and the surveillance of these individuals, as well as implementation of all Joint Intelligence Objectives Agency directives pertaining to the project.

4. A project providing for the employment of German scientists and technicians on a contract basis.

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TECHNICAL SERVICES DIVISION

Chief, Colonel D. L. Bower

The functions of this division are:

1. To provide plans for the development and implementation of the Center's document processing program.
2. To develop and implement plans which provide for the indoctrination of selected military personnel in the administration of Air Technical Intelligence Center field activities.
3. To administer a special document research program.
4. To receive, store, classify, catalog and ship certain foreign equipment.
5. To provide special-purpose equipment and supplies to authorized claimant-agencies participating in Air Technical Intelligence Center activities, either within the United States or in foreign areas.
6. To provide office equipment and supplies for Air Technical Intelligence Center personnel.

Sections and offices charged with performance and support of the Technical Services Division are as follows:

- a. Special Document Project Office - provides facilities whereby supplemental research documents and informational material requiring special security precautions can be made available to authorized persons. This involves provision for reproduction and dissemination of Top Secret material as directed,

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processing, and storage of Top Secret, Registered or other highly classified material, and the proper destruction of all waste incident to the preparation of Top Secret and other highly classified matter.

- b. Documents Services Section - receives, screens, catalogues, and routes documents to proper agencies. This section also accomplishes the preliminary evaluation of intelligence information contained in these incoming documents, maintains a biographic register of foreign scientific and technical personalities, performs technical photo-interpretation in support of the technical analysis program, and provides translation services when required. Reproduction and graphic services are also furnished by this section, including visual aids, for the preparation of ATIC studies, reports, and administrative publications.

The following branches support this section:

- (1) Documents Processing Branch - provides a controlled document processing system and repository for the Center. This involves maintenance of adequate records and proper routing controls, and the provision of a circulating facility for air technical intelligence information. In addition, this branch catalogues and indexes all air technical in-

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telligence information received at the Center from collection and dissemination sources.

- (2) Preliminary Research Branch - accomplishes the preliminary screening of air technical intelligence information, furnishes translation services and assists in the biographical register program. This screening aids in the routing of documents to interested agencies, divisions, sections and branches.
- (3) Graphic Services and Reproduction Branch - provides for all reproduction and graphic services requirements of the Center. This branch produces graphic portrayals of items needed in the production of intelligence, in lieu of adequate photographs or physical evidence of the equipment, and originates and develops drawings, graphs, illustrations and other visual media. The graphic services and reproduction branch also accomplishes technical analyses of photography and maintains liaison with other agencies for the development and processing of photographic material, such as microfilm, photographs and moving pictures.

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c. Air Technical Intelligence Indoctrination Section - indoctrinates personnel newly assigned to the Center. This indoctrination includes training and instruction in photography, orientation of newly assigned personnel in the activities of the Center, and conduct of the Air Technical Intelligence Investigator course.

These branches support the Air Technical Intelligence Indoctrination section:

- (1) Photographic Branch - which plans and implements photographic services (other than reproduction) and provides specialized instruction in photography to selected personnel.
- (2) Military and Civilian Training Branch - is responsible for orientation of personnel newly assigned to the Center. This branch also maintains a work pool of employees awaiting clearance, and schedules attendance at clerical classes conducted by Headquarters, Air Materiel Command. In addition, this branch plans and administers the Center's reserve program, including training and correspondence.
- (3) Air Technical Intelligence Training Branch - formulates and conducts the Air Technical Intelligence Investigator and the Air Technical Liaison Officer courses, insures the adequacy of instruction in Air Technical Intelligence field techniques, and maintains a cadre of Air Technical Intelligence field personnel.

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d. Material Services Section - provides certain logistical services necessary to the operation of the Center.

The following branches support this section:

- (1) Foreign Equipment Branch - is devoted to the processing of special items of foreign equipment received at the Center from the time such equipment arrives in the Zone of Interior to final disposition. Such processing includes receipt, disassembly, cleaning, inspection, reassembly cataloguing, display and distribution.
- (2) Air Technical Intelligence Equipment Branch - provides photographic and other special equipment, both domestic and foreign, to personnel participating in, or training for, air technical intelligence duties. This service is extended to personnel in ATIAA, ATLO, and the Air Intelligence Service Squadron.
- (3) Office Equipment Branch - provides office equipment and supplies necessary to the operation of the Center. It is also charged with providing janitorial services for the Center, the physical maintenance of janitorial facilities and repairs.

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TECHNICAL ANALYSIS DIVISION

Chief, Colonel S.H. Kirkland, Jr.

The functions of this division are:

1. ^{To} Produce finished air intelligence.
2. To assemble and maintain working files of technical and scientific data, essential to an accurate continuing appraisal of foreign aeronautical equipment.
3. To provide basic data on foreign air weapons and related material necessary in the preparation of recognition manuals and performance handbooks.
4. To produce technical reports of observations of unconventional aircraft, missiles, or of such other airborne objects as might indicate an advance in technological knowledge by a foreign power.

The following offices and sections of Technical Analysis Division implement the Division's broad objectives stated above:

- a. Office of the Technical Advisor - administers the preparation of air technical and scientific intelligence and of estimates of alien accomplishments and capabilities to conduct aerial warfare.
- b. Plans and Operations Office - monitors the division's operational effectiveness in the production of air technical intelligence. This office establishes project target dates, recommends project priorities and

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reviews objectives with a view towards providing policy direction for air technical intelligence analysis projects.

- c. Aircraft and Propulsion Section - performs air technical intelligence analysis and related duties, as described in detail in the functions of the Performance and Characteristics, Propulsion and Equipment Branches. This section also plans and develops air intelligence objectives relating to aircraft and guided missiles.

The three branches which further break down the analysis performed by this section are:

- (1) Performance and Characteristics Branch - performs air technical intelligence production functions as they relate to aerodynamic and general characteristics analyses, and performance estimates of aircraft and guided missiles.
- (2) Propulsion Branch - performs air technical intelligence functions as they relate to turbojet, turboprop, ramjet, pulse-jet and rocket engines; reciprocating and compound engines, propellers, accessories and component parts; fuels, lubricants, hydraulic fluids, coolants and related chemicals.

(3) Equipment Branch - performs air technical intelligence functions as they relate to instruments, navigation systems, hydraulic and pneumatic systems, electrical systems, and miscellaneous mechanical equipment in aircraft and guided missiles; aircrew equipment (including those aspects of aviation medicine affecting the development of aircrew equipment), photographic and meteorological equipment and systems.

d. Electronics Section - performs analyses of foreign accomplishments in electronics, including those in radiation, equipment development, and countermeasures.

The following Branches support this Section:

- (1) Radiation Branch - researches and analyzes intelligence pertaining to ground and airborne radar, electronic navigation, electronic communications, and electronic guided missile control.
- (2) Countermeasures Branch - researches and analyzes air intelligence information pertaining to electronic countermeasures to determine foreign capabilities in these fields.
- (3) Science and Components Branch - researches and analyzes intelligence information pertaining to

electronic sciences and techniques, infrared, vacuum tubes, electronic test equipment, and electronic components. This section also operates an equipment test laboratory.

- e. Associated Equipment Section - exercises general supervision over the functions of the Armament, Materials and Methods, and Nuclear Energy Branches. This Section researches, analyzes and evaluates intelligence pertaining to foreign accomplishments in the fields of aircraft armament, antiaircraft artillery effectiveness, aircraft materials, production methods and techniques, special weapons in the atomic, chemical and biological warfare fields.

These branches support the Associated Equipment Section:

- (1) Armament Branch - researches and analyzes intelligence information pertaining to foreign capabilities in such subjects as aircraft weapons, weapons control, bombing systems, antiaircraft artillery effectiveness, and aircraft vulnerability.
- (2) Materials and Methods Branch - researches and analyzes intelligence information pertaining to foreign capabilities in the production of aircraft, guided missiles and related components.
- (3) Nuclear Energy Branch - researches and analyzes intelligence information pertaining to alien capabilities in the fields of atomic energy, and in biological and chemical warfare.

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ACCOMPLISHMENTS

This section of the history describes the various accomplishments of the Center for the period covered by the report. Inasmuch as the activities of the various staff sections of the Office of the Commanding Officer were largely confined to matters of a routine administrative nature, emphasis has here been placed on reporting the accomplishments of the three technical divisions and their subordinate sections and branches.

An attempt has been made to maintain a simple informal narrative form throughout this portion of the history. It was found necessary, however, to document and ^{To} sub-divide certain passages for clarification.

Technical Requirements Division

At the beginning of the period covered by this history (1 July 1951), the Technical Requirements Division was undergoing a complete reorganization.

The framework for the organization had been determined, position descriptions had been written for the Office of the Chief, the Administrative Office, the Foreign Scientists Section, and the Collection Planning Office; but the task of writing specific job descriptions for the Collection Control Section and the ATL Program Section was still to be accomplished. As of 31 December 1951, two positions remained to be written for the Office of the Chief, ATL Program Section.

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Prior to the reorganization, some confusion had been evident, regarding clearly defined functions and responsibilities. In some instances, the functions of one component overlapped those of another. Upon completion of the planning phase of the new organization and the publication of official position descriptions, this situation was mainly corrected.

The next problem of major importance was that of staffing the organization with qualified personnel. After effecting reassignments from within the Center, in those cases where qualified personnel were available, an intensive recruiting program was launched in an effort to secure incumbents for the remaining vacancies.

In addition to the vacancies within the Technical Requirements Division, proper, there was an acute shortage of personnel, both military and civilian, in the overseas ATIL Offices. During the past six months, the ATLO Program has been widely publicized domestically through the means of AF Regulation 36-43, by notices to major Air Commands, and by various other programs carried on by the Air Technical Intelligence Center. This publicity has done much to ease the critical personnel shortage in the overseas theaters.

It is believed that with the gaining recognition of the ATLO Program, the vacancies which exist at present will be filled within the next six months. This supposition is based on the rate of assignment of personnel to the program within the reporting period. As of 1 July 1951, there were 67 persons assigned to overseas theaters, as compared with 83 on 31 December 1951. Although several vacancies still exist within the division,

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it is also believed that these can be satisfactorily filled within the next few months.

During the month of August, 1951, the division chief, Colonel Malcolm D. Seashore, ordered a complete review and rewrite of all division projects. A definite line of demarcation was drawn between those projects to be monitored by the Collection Control Section and the ATL Program Section. Consequently, several projects which ^{had been} ~~were~~ assigned to the Collection Control Section were transferred to the ATL Program Section.

All organizational references contained in the projects were changed to correspond with the new organizational structure. Prior to this, certain operations had been conducted without the benefit of specific projects. The time expended on these operations had been charged to a general "Collection" project which served as a "catchall" in these instances. To correct this situation, new projects were written to cover all current operations, and a policy was established whereby all future work assignments would be covered by a project which would be initiated immediately following the assignment.

This revision of projects within the division has served two purposes:

1. The collection control Section and the ATL Program Section are charged with only those projects which are homogeneous to their respective organizations. X

2. Operational costs are now ^{more} accurately reflected.

Changes have been made in the project for hiring scientific personnel for air technical liaison duty overseas. Experience has shown that under

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the previous arrangements for employing such personnel, the time in which they were under contract was not of sufficient duration to afford the Air Technical Intelligence Center maximum benefit from their employment. X

Under the old arrangement, scientists were hired under contract for 90 days. After their arrival overseas, the majority of this period was spent in becoming familiar with their assignment, and in making contacts. There was little time left in which they could collect intelligence information and material for the Center. At present, scientists are hired for a minimum of one year to accomplish a job in a specific field. This allows for three months in which contacts can be made, and the remaining nine months can^{then} be devoted to the collection of intelligence information. ✓

The Domestic Collection Program, which involves the exploitation of American and foreign nationals in the United States, who have returned from overseas or who have obtained information through correspondence, has been greatly expanded. Intelligence information is also being received from contractors who have offices in foreign countries, or who send highly qualified technical personnel to Europe or Asia for various jobs. It is anticipated that this program will be in full operation by April 1952. ✓

Quite a bit of emphasis has been placed on the exploitation of the so-called "summer scientists"⁵ who have returned from overseas and also A

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5. "Summer scientists" refers to a group of American scientists, mainly college or university professors, who are being sent overseas, on a contract basis, for the purpose of collecting technical intelligence information in their individual fields. The term "summer" was applied, inasmuch as these scientists were usually available for this purpose only during the summer months.

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upon those scientists who were selected for "one shot" projects and are now residing permanently in the United States. These individuals have been encouraged to correspond with the contacts they made during their overseas tour of duty, with the idea of obtaining intelligence material from people who are now located in that particular theater. This phase of collection has grown to the extent that it now requires the full-time attention of one officer.

Dossiers have been completed and are being kept current on a group of special scientific personnel within the United States, whose services might be desired by ATIC in future collection programs. These scientific personnel are specialists in various technical fields, who have indicated that they would be available for assignment with ATIC, in the event their services were needed.

As of 1 July 1951, this division was responsible for complete administration of 670 foreign scientists and ^{their} dependents, including both immigrated and non-immigrated personnel. This responsibility covers specialists who are under Air Force contracts and their dependents, as well as non-immigrated dependents of released personnel. Immigration of dependents has accelerated somewhat, 78 having come to the United States in the period covered by this report. Immigration of specialists has not increased greatly since June, inasmuch as most of them are either inadmissible under provisions of the McCarran Act or are recent arrivals. Seven specialists have immigrated to the United States in the six month period covered by this report.

Although the specialists were given substantial pay increases, effective 1 July 1951, to correspond with equivalent Civil Service positions, there is still a certain amount of discord because of the recent Civil Service pay in-

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crease. This increase does not apply to "Paperclip" personnel because they are contract employees, regardless of contractual provisions based on Civil Service regulations.

The main problem confronting the Technical Requirements Division in connection with these specialists continues to be the obstacle presented by the Internal Security Act of 1950, as amended. As of 31 December 1951, the division is responsible for 654 specialists and dependents, of whom 32 specialists and 288 dependents are yet to be immigrated.

TECHNICAL SERVICES DIVISION

The Technical Services Division, as of this reporting period, was responsible for those logistical services required to support all ATIC operations. These included receiving, processing, storage of documents and foreign aeronautical equipment, limited reproduction services for duplication of documents, and publishing intelligence reports and studies, translation services, and specialized training and indoctrination of personnel performing air technical intelligence duties.

On 1 October 1951, Colonel Donald L. Bower was assigned as Chief, Technical Services Division, vice Lt Colonel Andrew J. Hemstreet. Lt Colonel Marshal C. Edenfield was assigned as Deputy Chief on 13 June 1951, then relieved and reassigned from this Division on 19 October 1951. Captain James D. Deatherage was assigned as Plane and Operations Officer on 30 October 1951.

At the beginning of this period, authorized civilian strength was 131. This authorization has now been increased to 155, for planning

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purposes, but actual assignment still remains at the original 131. Military strength authorization of 35 officers and 49 airmen has not changed. Since the accomplishments of this division consisted, in the main, of the achievements of its various components, this portion of the History has been broken down into the accomplishments of the various offices, sections, and branches.

Special Documents Project Office

This office initiated and implemented a project to cover the receipt, storage, and accountability for a group of Top Secret documents in a special technical field, which were received from Hq USAF for analysis and microfilming. This office accomplished destruction of the original material, as directed. At the end of this reporting period, this action had been completed on 107 documents.

Policies were also established which it is hoped will contribute to more expeditious and efficient handling of highly classified material.⁶ Changes were also effected in the indexing system so that reference material could be more expeditiously obtained.

Document Services Section

Several changes in the staff of the Document Services Section occurred during this reporting period. Major Evan T. Hopkins was assigned as Chief, Document Services Section, on 3 December 1951. Miss E. Janet Klinger was assigned as Chief, Document Processing Branch, in July 1951;

6. Reply to letter from ATIS-2, 23 Apr 51, to Directorate of Intelligence, Hq USAF, was received 26 Dec 51.

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Major William H. Keller was appointed Chief, Preliminary Research Branch, 3 December 1951; Captain William F. Willner was assigned Chief, Reproduction and Graphic Services Branch, 4 December 1951.

Action was also taken to "sell" the services of the Document Processing Branch to the other components of the Air Technical Intelligence Center. This was done in various ways, as follows:

1. Approximately 17 form letters and disposition forms were originated as a means of expediting requests for known documents. These forms have helped eliminate many hours of dictation and original typing, and have thus resulted in faster action in fulfilling requests.

2. Distribution of ATIC Intelligence Studies was increased from approximately 130 copies to 300 copies. In addition to the ATIC Intelligence Studies, distribution is being made of five other publications which originate in the Center. A record system of these ATIC products, as well as of some 30 other miscellaneous intelligence publications has been established. Distribution of these various publications includes not only dissemination to ATIC components, but to Headquarters USAF, major Air Force Commands and their components, and to components of the Department of Defense, and private industry. Approximately 3,000 items are recorded and distributed monthly.

3. As of the 1st of July 1951, a standard control number (ATIC No.) is being assigned to every incoming document and a processing form (Form 75) prepared therefor. Except for approximately three months, a record of en-routed documents and final disposition has been maintained in the master ATIC Locator Card File.

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4. The program for retention, retirement, and destruction of documents has been further implemented for the ATI Repository. A simplified record system for documents borrowed from the ATI Repository has been installed. Further changes in the ATI Repository consist of a bulletin board on which the retirement and destruction program is posted, as well as an accession list of Reading Room material received daily, and other pertinent information concerning the ATI Repository. A Russian Language Library has been established but has not been completed. Seven four-drawer file cabinets have been added to the ATI Repository, providing additional storage space.

5. A publication entitled "Did You Know This About the Document Processing Branch?" was prepared during November and approximately 200 copies were distributed throughout the Center. This publication was the first of a series designed informally to outline the services available within the Document Processing Branch.

6. A study was initiated to determine the need for a Maps and Visual Aids Unit. To date, the study reveals that such a unit is desirable and necessary, but no action has as yet been completed to actually establish such a unit.

7. Expansion of the locator card files to provide adequate research facilities and the use of the new 5 X 8 form 75 has necessitated the procurement of twelve new card files, and has resulted in a complete re-organization of all files.

As originally conceived, the Screening Group of the Preliminary Research Branch was to have been charged with the responsibility for selecting, examining, evaluating, and abstracting pertinent information

from all documents received by the Air Technical Intelligence Center, and for providing the analysts in the Technical Analysis Division with information for necessary final analysis.

This responsibility would have required the services of qualified engineers and experts in technical fields who were also qualified as multilingual translators to act as members of the screening panel. An intense and comprehensive recruiting program was conducted, therefore, over a period of months, in an attempt to secure properly qualified personnel.

The original concept then had to be modified for a number of reasons, among them, the inability to obtain technically qualified personnel with language competence who were willing to accept employment at the salary the Center could offer, and the difficulties encountered in obtaining security clearances for those who would accept employment. The Preliminary Research Branch has had to revert, therefore, to operating as it did previously, accomplishing only the preliminary selection and examination of documents.

The growing demand for intelligence information on foreign technological research and development has necessitated the addition of a facilities section to the existing biographic register, which is maintained by the Biographic and Facilities Group of the Preliminary Research Branch.

The Translation Group of the Preliminary Research Branch, during this reporting period, furnished an individual as Air Force representative for a project devoted to compiling and publishing a Russian-English scientific and technical dictionary.

When it became apparent that the original plan of selecting, examining, evaluating, and abstracting documents could not be implemented, action was

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taken to assemble a staff of technically trained officers and airmen to perform the screening functions from within the Preliminary Research Branch. It also became necessary to utilize members of other groups within the branch, as well as analysts ^{lent} ~~loaned~~ from the Technical Analysis Division. Despite the fluctuation in the number of screeners available to the group for the work, and ^{despite} the changes inherent in any new operation or re-organization, the group processed 56,634 documents during this reporting period.

A training program was also established whereby officer-students from the USAF Institute of Technology and technically trained officers awaiting entrance into Air Technical Intelligence Investigator's School would receive instruction in proper screening procedures with the possibility of later securing their services. As a result of this program, considerable aid was given to the Preliminary Research Branch in its screening functions, and two officers who participated in this training were assigned to the branch and later became group leaders.

The same staffing problem was encountered by the branch in filling the positions in the Translation Group with qualified civilians. A number of academically qualified linguists indicated their willingness to accept employment as translators, but it was found that language competence alone, without technical knowledge, precluded quality technical translations.

Attention was then turned toward obtaining officers and airmen with linguistic ability. This action resulted in the assignment of three officers and four airmen to the branch during this period. This staff enabled the group to accomplish translations in Russian, Polish, Czechoslovakian, Serbo-Croatian, Ukranian, German, French, Italian, Spanish, and Roumanian.

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Translations that could not be made by the members of this group are being accomplished per contract with Charles A. Meyer and Company, Inc. (Contract AF 33 (600)-5969), negotiated on approximately 1 July 1951. On 10 December 1951, a change order (Change Order No. 1), amended the Charles A. Meyer and Company, Inc., contract to provide for additional translation services, including identification translations with oral translations to be accomplished by the contractor's resident representatives. The Change Order also provided for the transposition of an English-Russian Technical dictionary to Russian-English.

The staff screened 5,634 foreign language documents, translating the title and/or the gist of these documents for presentation to the technical analysts. A total of 696 documents containing 2,433,599 words were translated in the period covered by this history. The Translation Group also acted as an information bureau for the staff of the Preliminary Research Branch and for other offices within the Center.

The Translation Group publishes a monthly list of documents translated or in the process of translation, in accordance with a previous agreement with Central Intelligence Agency. During this reporting period, the National Advisory Committee of Aeronautics and the Central Air Documents Office has been added to the distribution list.

It is hoped that this free and rapid interchange of translation information will lead to elimination of duplication of effort among the various translation agencies. The interchange between the Air Technical Intelligence Center and the Central Intelligence Agency has proved beneficial for both agencies.

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Early in the period covered by this history, action was taken to implement plans for contracting with Battelle Memorial Institute in Columbus, Ohio, for the reorganization and expansion of the existing Biographic Register, and for the addition of a facilities section to that register. Battelle's comprehensive, currently-maintained file of information extracted from foreign technical publications added weight to the decision to contract with the Institute for these services.

Therefore the project was approved on 10 August 1951, as a part of "Project Stork", entitled "Biographic Register on Foreign Personalities and Facilities Significant from the Standpoint of Technical Intelligence". On 2 October 1951 the safes containing the existing Biographic Register were transported to Battelle. A staff member of the Biographic and Facilities Unit spent approximately two weeks at the Institute in order to acquaint the staff there with the contents of the Register. There was a lull in activity on this project ~~for a period of time~~ while Battelle assembled a staff, obtained security clearances, and determined their ^{own} method of operations. On 27 November 1951 Captain Robert G. McCulloch, Unit Chief of the Biographic and Facilities Unit, was appointed project monitor for the Technical Services Division on this project.

The activities of the Biographic and Facilities Unit were stepped up with the employment of three additional Intelligence Information Analysts. Prior to and following the removal of the Biographic Register to Columbus, group staff members were engaged in fulfilling their regularly scheduled requests and ⁱⁿ the preparation of reports and biographies, in compliance with

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special requests from the Technical Analysis Division and other user agencies. During this period a study was prepared to determine the capability of the USSR to develop new and effective atomic weapons. This special report required months of intensive research.⁷ In August 1951 the Unit was charged with the responsibility of producing the quarterly summary entitled "Known and Suspected Soviet Research Centers". During the period of this history the Unit has been able to add information on an additional seventy research and development centers to this report.⁸ Staff members, through research of documents, have added 200 biographies to the Register and have collected, assembled, and analyzed information contained in 260 reference documents and publications. Approximately 150 biographical sketches have been provided analysts within the Center on oral requests. A comprehensive report of the German scientists engaged in fuel and lubricant research for the Soviets required two months of research and preparation.⁹

Administrative procedures and systems have been planned and put into effect to facilitate the operation of the Unit. Continuous efforts have been made by the group leader and its staff to determine the services required by the Technical Analysis Division of ATIC and the Register's other

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7. USSR Atomic Personality Study, an interview with Mr. George V. Clark, Staff member of Biographic and Facilities Unit.
 8. Known and Suspected Soviet Research Centers, September 1951, December 1951 issues.
 9. Biographies of German Scientists engaged in fuels and lubricants research for the USSR.

users and exchange agencies.

To improve the quality of the reproduction of all material disseminated outside the Air Technical Intelligence Center, the following action has been taken by the Reproduction and Graphic Services Branch:

1. New covers have been designed and printed for all Air Technical Intelligence Center publications.
2. All clerical personnel engaged in the typing of ATIC publications have been thoroughly briefed on such procedures as the preparation of master ^{copies} with reference to format, pagination, and set-up for reverse side printing.
3. The security classifications have been pre-printed on all paper used in final copies of ATIC publications.

Although the requirements for reproduction of the number of copies of ATIC publications has increased during this period from approximately 115 to 300, the time required to reproduce ATIC studies was reduced from an average of three weeks to an approximate average of seven days.

The Foreign Equipment Branch has received material continually from overseas theaters. The volume of this material averages approximately 25 items per week.

No doubt the most important arrival was that of the MIG-15, procured through the joint efforts of the Army, Navy, Air Force and British forces in Korea. During the three-day period which this material remained at Building 89, more than 250 visitors were admitted to the storage area for the purpose of examining the equipment. Among the visitors were representatives of the Navy, SAC, AFOIN-V/TC, ARDC, WCB, WSEG, and selected

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members of industry. The work of preliminary examination and evaluation was carried out 24 hours a day, and preliminary evaluation reports were disseminated within a 72-hour period after arrival of the materiel. ✓

Another arrival was a late model of a complete Soviet YAK-11, from the European Theater. Examination of this airplane and its equipment proved fruitful, particularly the examination of the communications and gun-sighting systems, which were for the most part of 1950 manufacture.

The Foreign Equipment Branch was responsible for the preparation of a display area for the purpose of showing authorized visitors a selection of foreign equipment which would readily demonstrate the range of equipment now undergoing evaluation at the Center. This display serves also to suggest potential evaluation activities and to provide instructional material for personnel undergoing training for intelligence assignments.

The extraction of name-plate data has been accelerated by increased requirements of Headquarters USAF, the Air Ministry, CIA, and other interested agencies.

The ATI Equipment Branch was consolidated and located in Building 278, Area A, at the beginning of this reporting period. Complete storage facilities were rearranged and bins were obtained or built by branch personnel to provide satisfactory storage of approximately 600 items.

The following shipping documents were processed and completed on air shipments:

Continental Air Force Depots	3 each
Overseas---FEAF-ATIL Office	51 each

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USAFE-ATIL Office	50 each
USFA-ATIL Office	24 each
A/A System	50 each
ALASKA-5004th AISS	17 each
FEAF 6004th AISS	15 each

All combat vehicles were turned in, pursuant to USAF regulations. Since the branch had established an auxiliary motor pool in accordance with USAF Motor Vehicle Manual 77-1, it was possible to obtain three new one-half ton Ford pick-up trucks for ATI transportation. These trucks covered a total of 7,500 miles, including 7,000 miles for non-routine trips. One tractor and a closed van were obtained on loan from the Base Motor Pool (MR 151) to accomplish five non-routine trips relative to handling of foreign equipment. Two 2½ ton GMC 6X6 trucks were obtained for a two-month loan in anticipation of the needs of the ATIG for participation in a winter maneuver "Project Snowfall".

In the Photographic Branch of the ATI Indoctrination Section, the following training and indoctrination was performed:

Attaches-Designate (Officer)	19 received	48 hrs Photo Training
Attaches-Designate (Airmen)	4 received	65 " "
ATLO	18 received	65 " "
ATI Investigator (Officer)	21 received	65 " "
ATI Investigator (Airmen)	3 received	65 " "

In the period from 1 August 1951 to 31 December 1951, 539 rolls of 35mm films were processed, and 8,076 prints were produced.

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Plans for expansion of the Photographic Laboratory were completed and approved in July 1951, but to date alterations have not been started.

In the Military and Civilian Training Branch, 61 military and 62 civilian personnel were received and processed. A total of 59 personnel were entered in training classes (clerical, personnel, drivers training, etc.) conducted by the base. A special orientation was conducted for 46 students of the Senior Intelligence Course, AC&SIS, Maxwell AFB in October. Also during October, Col Harold B. Hinton, MATS-USAFR, was in the Center for two weeks to study the operation of the Center and Air Technical Intelligence in general.

The Military and Civilian Training Branch was charged with responsibility for the Security Consciousness program on 27 July 1951. To date, 61 man-hours have been devoted to briefing of newly assigned personnel. Distribution of security material received from the base has included 200 Security Indoctrination Pamphlets (to all divisions), 150 Unit Security Officer Newsletters (to all divisions) and 100 Security Posters.

Two classes of the ATI Investigator School were graduated during the period of this history. The first class was graduated on 27 July¹⁹⁵¹; the second, 5 October¹⁹⁵¹. Of the 18 officers and two airmen completing the course, seven officers were assigned to FEAFF, five officers to ATIA, two officers and one airman to ATIRL, two officers and one airman to ATIST, and one officer to ATISD. The remaining officer, who attended the course on TDY from Air Defense Command, has returned to his home station.

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Responsibility for ATLO training was assumed on 28 November 1951, and on 31 December 1951 a total of nine officers were in training. Upon request of ATIRL, a special intelligence course of 17 hours was prepared, and is being presented, on a strict need-to-know basis, to specified personnel destined for overseas.

Responsibility for Berlitz language training was assumed also on 28 November 1951. At that time, six ATLO's were receiving German instruction.

1126TH AIR INTELLIGENCE SERVICES SQUADRON

The 1126th Air Intelligence Services Squadron (ATIC) has operated under the direction of the Commander, 1125th USAF Field Activities Group (ATIC) for the entire reporting period. There have been no major changes except in strength, as indicated:

<u>1 Jul 51</u>	<u>31 Dec 51</u>
1-Lt Col	1-Lt Col
1-Major	1-M/Sgt
1-M/Sgt	2-S/Sgt
1-T/Sgt	1-Sgt
2-S/Sgt	2-Cpl
1-Sgt	
1-Cpl	
2-Pfc or Pvt	

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TECHNICAL ANALYSIS DIVISION

Continued concentrated effort has been exerted by this division to obtain the competent technical skills necessary to perform its mission. Recruitment from educational and industrial institutions, so far, has not produced satisfactory results, but this program will continue with all possible effort.

Thirty-eight military personnel -- 37 technical and one non-technical -- were assigned to the division as of 31 December 1951. Forty-three military positions were authorized the division during the reporting period.

Quantitatively, the figures below reveal the status of project activity in this division's various technical fields:

	<u>Active as of 1 Jul 51</u>	<u>Initiated between 1 Jul and 31 Dec 51</u>	<u>Completed between 1 Jul and 31 Dec 51</u>	<u>Active as of 1 Jan 52</u>
Aircraft & Propulsion	31	25	8	48
Electronics	19	8	12	15
Associated Equipment	7	13	2	18
	<u>57</u>	<u>46</u>	<u>22</u> <i>Miss</i>	<u>81</u>

The page following lists AFIC publications and other intelligence end products issued in technical fields during the reporting period:

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	<u>Aircraft & Propulsion</u>	<u>Electronics</u>	<u>Associated Equipment</u>	<u>Total</u>
Air Technical Intelligence Studies	10	11	2	23
Technical Reports	4	4	0	8
Preliminary Rpts on Foreign Equipment	4	34	0	38
Air Intelligence Digest Articles	13	11	14	38
Tech Briefs	67	51	109	227
AF Forms 112, Air Intelligence Rpts	4	0	4	8

Additionally, 16 ATI, six Electronic and three Associated Equipment studies are awaiting final coordination or reproduction.

Developments which contributed significantly to the mission of this division are:

1. Formation of the Air Technical Intelligence Center Propulsion Panel.

On 17 and 18 September 1951, the Aircraft and Propulsion Section, assisted by the Associated Equipment Section, conducted a conference with representatives from aircraft engine industries to discuss the possible formation of a Propulsion Panel.

The conference indicated that such a panel would be mutually advantageous to industry, ATIC and other government agencies, and a permanent panel was recommended. One regular and two alternate ATIC

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analysts will participate actively in future meetings. Reports will be forwarded to aircraft engine manufacturers, NACA Flight Propulsion Lab, the Bureau of Aeronautics, the Wright Air Development Center and other interested organizations.

The Panel has established industrial participation in the analysis and evaluation of foreign aircraft power plant material; provided industry with a channel through which it may be informed of Soviet aerial warfare capabilities insofar as propulsion systems are concerned; and established close liaison between industry and ATIC on technical intelligence pertaining to foreign aircraft propulsion systems.

2. Joint Anglo-American Study on Soviet Aircraft Jet Propulsion Development (Project No. 10124)

The second joint Anglo-American study of USSR aircraft power-plant development was made in London, England, between 31 Oct and 14 Dec 51. Messrs Louis DeRoze and Peter Stranges of the Propulsion Branch, Aircraft and Propulsion Section, ATIC, represented the USAF.

A rough draft on the study was completed on 14 Dec 51 with the complete agreement of the Study Group. About 400 copies of the study will be reproduced by the British (DDI/Tech) of which 250 will be sent to ATIC for distribution within the U.S.

The British are urging a similar joint study by aircraft specialists in the very near future and have recommended that joint studies be undertaken frequently to insure the dissemination of coordinated intelligence estimates to the agencies concerned, particularly SHAPE.

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3. Formation of the Air Technical Intelligence Center Aircraft

Panel

On 11 and 12 December 1951, the Aircraft and Propulsion Section, assisted by the Associated Equipment and Electronic Sections, conducted a conference with representatives from the aircraft industry and other government agencies. This conference was called to brief representatives on foreign developments in aircraft and aircraft equipment and to discuss the formation of an Aircraft Panel.

The discussion with the industrial representatives indicated that such a panel would be mutually advantageous, and a permanent panel was recommended. When organized, the panel will establish industrial participation in the analysis and evaluation of foreign aircraft and aircraft equipment; provide industry with a channel through which it may be informed of the Soviet capabilities to conduct aerial warfare insofar as aircraft and aircraft equipment are concerned; and provide close liaison between industry and AFIC on technical intelligence pertaining to foreign aircraft and aircraft systems.

4. Pulsejet and Rocket Power Plant and Rocket Propellents Developments (Projects 10100, 10113 and 10096)

For the first time in the history of technical intelligence, information is being collated on foreign and domestic pulsejet power plant developments and on rocket power plant and rocket propellant developments. Studies are in final coordination which, for the first time, will present

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an evaluation of all the data known regarding the pulsejet, rocket power plant and rocket propellant development of the USSR.

5. The Type-27 Soviet Multi-Purpose Bomber (Project 10102)

Air Technical Intelligence Study No. 102-AC51/27-34 was published on the Type-27 airplane to replace a previous study on this aircraft.

An important development during the progress of this project was the acquisition of aerial photographs which enabled the intelligence specialists of the Aircraft and Propulsion Section, ATIC, to determine the size of the Type-27 airplane with greater accuracy than before. Furthermore, this confirmed the theory that a centrifugal type engine is installed in this airplane. It was also determined that a modified version of the Type-27 exists which has been designated the Type 31.

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6. Preliminary Analysis of the MIG-15 Airplane (Report No. 10115)

A Soviet MIG-15 airplane, badly damaged but with most major components in recognizable condition, was received in the Air Technical Intelligence Center in July 1951. A Flash Report No. ATIAA-59 was published immediately and an interim ATIC Study No. 102-AC51/28-34 prepared, and distributed in August 1951.

The most outstanding and immediately recognizable fact was that the engine installed in the MIG-15 is a Soviet-built copy of the original Rolls-Royce Nene engine, a finding verifying the use of two engine types in the MIG-15. The second is a more powerful engine based on the Nene design.

The engine was forwarded to the Pratt-Whitney Division of the United Aircraft Corporation for detail^{ed} evaluation. This analysis, conducted in cooperation with specialists of the Propulsion Branch, ATIC, permitted the release of an ATIC Study (No. 102-AC51/3134) of considerable importance to the USAF.

The airframe was sent to Cornell Aeronautical Laboratory for detailed evaluation under contract. Based on the contractor's evaluation and report, a final ATIC Study will be published.

7. The Yak-11 Aircraft (Project No. 10098)

A Hungarian-operated Soviet Yak-11 trainer which crash-landed in Siegenburg, Germany, was received in the Air Technical Intelligence Center in November 1951. A Flash Report (No. ATIAA-61) was

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published immediately.

The Yak-11 is the Soviet Counterpart of the USAF T-6 airplane. This Yak-11 was evidently built in early 1951 and, except for damage incurred in the crash, was in excellent condition. The aircraft was not restored to flight condition.

8. Evaluation of Reports on Unidentified Aerial Objects
(Project No. 10073)

This project involves the collection of reports of unidentified aerial objects; the evaluation, as to source and content, of reports of visual or electronic sightings of unidentified aerial objects submitted by military or civilian sources; the investigation of reports of such sightings through field work when deemed necessary; and the preparation of periodic status reports for the information of the D/I, Hq USAF. This investigation has been in progress for approximately four years and a new increase in activity has been initiated in studying and indexing project records to enable a statistical survey of incidents to be accomplished.

It is contemplated that all of the sightings of unconventional flying objects will be cross-indexed according to size, color, location, etc., so that as much statistical data as possible will be available. It is believed that possibly several general characteristics of the sightings will be determined from the mass of data on file in ATIC.

This project concentrated on those incidents that appear to

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have originated from high grade sources, such as pilots, technically trained people, etc. The exception to this was where a number of sightings occur in a certain area at about the same time.

9. Development of the Soviet EF-150 Prototype Aircraft
(Project No. 10118)

Information was received and evaluated which reflects the development of the EF-150 aircraft and includes background information on several Soviet-developed aircraft which preceded the EF-150, ^{this study further provided} and served as working experience for the particular group of engineers currently associated with the EF-150 project.

Several experimental aircraft have been developed by the former Junkers group of Germany, under the direction of the Soviets. These aircraft include two modified versions of the German Ju-287, swept-forward wing bomber, the EF-131 and EF-140. The EF-150 is a swept-back prototype designed and under construction by this group, which had its design initially inspired by the USAF XB-47 aircraft.

10. The Soviet 468 Airplane

Information was received and evaluated on a delta-wing supersonic rocket-powered aircraft design, designated the 468, which according to a reliable report, was scheduled for prototype construction as of the spring of 1951. Two glider versions of the 468, intended

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for pilot training in delta-wing aircraft characteristics, have been in work ^{preparation} and, possibly, may now be complete.

Reported performance anticipated of the 468 aircraft is 860 knots high speed at a 49,000 ft altitude, a ceiling of 70,000 ft., and a total endurance of 30 minutes. A project encompassing the estimates of the ATIC regarding the performance, characteristics, and capabilities of this aircraft is intended for initiation upon completion of the EP-150 study.

11. The Type 31 Long-Range Bomber (Project No. 10094)

Based on rather low quality photographic coverage of the July 1951 airshow at Tushino, together with an airshow photograph released by the Soviet publication "Pravda," a preliminary analysis of the Type 31 airplane, a new Soviet heavy bomber, was made within two weeks after receipt of the intelligence material. The result of the analysis was published as an ATIC study, "Preliminary Analysis of Soviet Long-Range Bomber" (Study No. 102-AC51/29-34)

Subsequent to publication of the preliminary report, a detailed analysis of available photographs was undertaken for the purpose of determining more accurately the physical characteristics of the aircraft. This work has resulted in elimination of the Ju-224 Diesel

engine from further consideration as a possible engine installation in the Type 31. A re-evaluation of performance has been made, based on provisional installation of ASh-90 engines in the aircraft flown in the airshow, and ^{on} the probable installation of Jumo 022 turboprops in the production version. Results of the additional analysis will be made available shortly as a new ATIC study.

12. Analysis and Evaluation of Foreign Aircraft Fuels and Lubricant Samples (Project No. 10095)

This project arranged for the analysis of foreign aircraft fuel and lubricant samples by qualified independent laboratories, as and when the samples are received by the Air Technical Intelligence Center. It also provides for the evaluation of the laboratory analysis data on these materials from the standpoint of foreign capabilities in quality, performance, method of manufacture and over-all practice in the application of these materials.

It has been determined desirable to prepare a study which compiles the laboratory analysis data of all fuel, lubricants and other samples investigated during the past ^{two} 2 years. These data will be useful in supplying information to the CRC Group in their development of adequate test procedures for evaluating future samples.

The CRC (Coordinating Research Council, Inc.) has been

selected to work in conjunction with the AFIC in establishing analysis test procedures to cope with unknown compositions of foreign petroleum materials identified only as to usage. The tests are designed to obtain the maximum of intelligence data from samples limited in quantity. The CRC will meet three to four times annually to discuss and summarize individual petroleum analysis reports on data which will be submitted to them during the intervening period.

13. Soviet Aircraft Equipment Received from FEAF

Several items of captured equipment have been received by AFIC. This equipment has been in a continual state of analysis to gather significant information regarding Soviet aircraft equipment.

The YAK-11 aircraft equipment, most of which is 1950 vintage, is being explored to establish progress trends in designs and developments of Soviet equipment.

Of the equipment received in the AFIC, many items have been submitted to other agencies for test and analysis for possible new design features. The Wright Air Development Center laboratories and organizations have such items as an Artificial Horizon (newly designed) which will be installed in an aircraft for flight testing; electro-mechanical actuators from both the previously acquired equipment and the MIG-15; and hydraulic actuators and struts. The generator from the MIG-15, captured in July 1951, has been sent to Westinghouse for analysis to determine high-altitude capabilities.

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14. Foreign Development in Computation Machinery

(Project 20036)

Project 20036, dealing with Soviet computer activity, gained considerable momentum during the second half of 1951. Due to fortuitous circumstances, an excellent source of both information and ideas is available for this project. Since the field of computer utilization shows promise of being almost limitless, particularly in industrial application, this project is considered of prime importance.

15. Air Aspects of Decimeter Communications Systems

Project 20045 will condense known information on Soviet decimeter communications equipments and activities. An upsurge of interest in this field by the Soviets may explain the seeming lack of improvements in other more common communication areas.

16. Critical Materials Usage in the Soviet Nene Engine

(Project 30027)

The purpose of this project was to estimate the quantity of critical materials found in the Soviet Nene engine. Critical materials considered were nickel, chromium, cobalt, tungsten, molybdenum, and columbium. This project was initiated as the result of a request from the Chairman of the Munitions Board and, presumably, will be used as a guide for possible conservation of critical materials in US jet engines. The quantities of critical materials determined were based on known Soviet Nene critical materials usage, similarity of Soviet Nene to a US engine, and

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known Soviet metallurgical practices.

The project was initiated 25 June 1951, and the ATIC Study resulting therefrom (No. 102-AE-51/5-34) was given standard distribution 11 September 1951. Advance copies were sent to the Chairman of the Munitions Board 2 July 1951. The project was terminated 20 September 1951.

17. Defensive Fire Control Diagrams (Project 30032)

The purpose of this project was to prepare defensive fire control diagrams for the following Soviet aircraft: TU-2, PE-2, Type 27, IL-4 and IL-10. These diagrams were to be used for briefing and training USAF combat crews.

Diagrams were originally completed with a classification of Confidential and Secret (Type 27). Each diagram contained the field of fire and type of fire control for each gun installation, passive protective armament of each aircraft, and type and characteristics of each gun.

This project was initiated at the request of AFOIN-V/TC (Director of Intelligence, Tech Capabilities Branch, Hq USAF) on 30 August 1951. Diagrams were hand-carried to Tech Capabilities Branch by project monitor 1 November 1951. Discussion with Lt Col Thomas of that Branch led to the conclusion that maximum utilization of the diagrams could be made only if their classification were Restricted or lower. Certain changes were made in the original diagrams to meet this requirement.

18. Project Stork (Project No. 9974)

This project is operated under Air Force Contract No. AF-33 (038)-4044 and has progressed satisfactorily since the publication of the semi-annual history of Technical Analysis Division in June 1951. During the period covered by this report, 83 separate projects had been initiated under the provisions of the contract. Of these projects, 20 have been completed. Sixteen technical and three special reports have been published in final form and distributed.

Seven technical reports are being printed, at present, and four studies have been submitted to ATIC for coordination prior to publication. Seven of the initial 83 projects have been cancelled or have been integrated with other projects. All of the others are progressing to the satisfaction of the Project Monitor.

The contractor has expended considerable time and effort in training qualified personnel to be utilized on the project. Currently, 104 of the contractor's employees are working full or part-time on the project.

Close coordination between the contractor's engineers and ATIC engineers has been established. Now that the initial ground work has been laid, and the necessary training of the outside personnel accomplished, a firmer system of control is being set up and implemented by the Project Monitor.

By 31 December 1951, the request for further extension of the basic contract had been submitted, through channels, to the Procurement

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Officer responsible for the contract. It is felt that this contractor is doing much to aid the ATIC mission, and that the relationship will grow to the greater benefit of both organizations.

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APPENDIX

TAB A - General Order 31, Headquarters

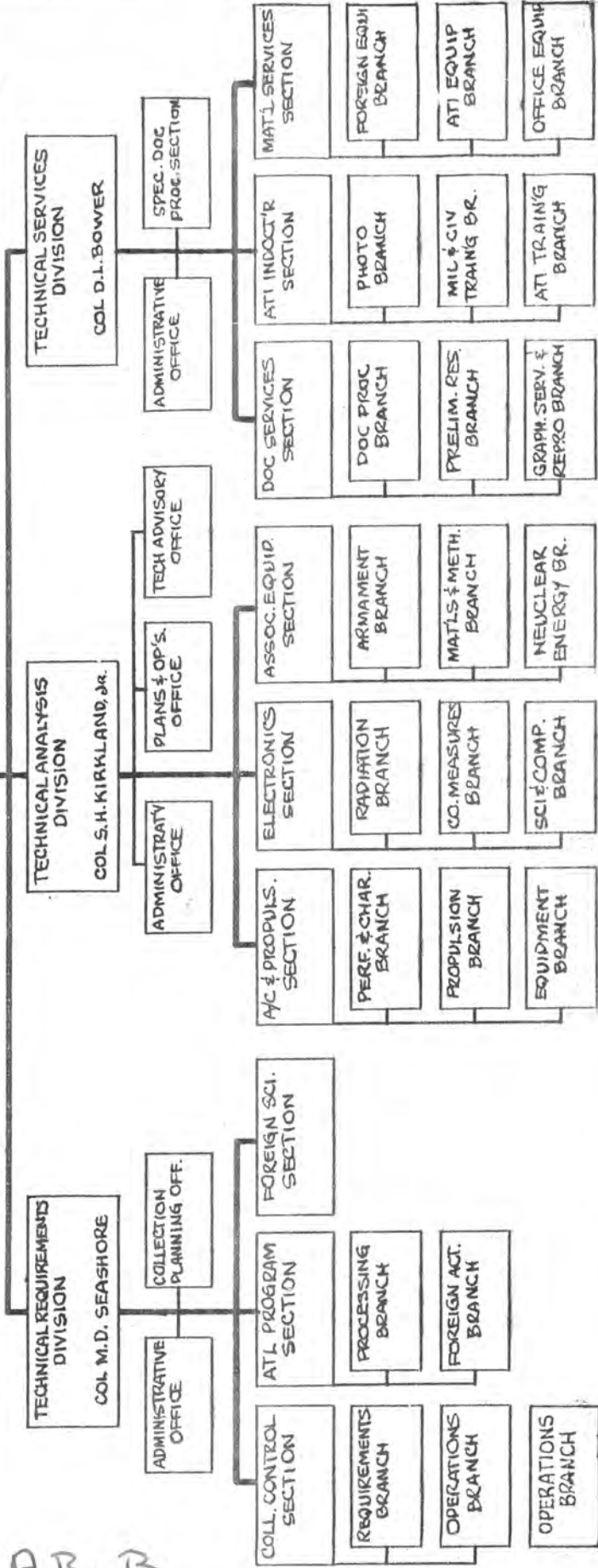
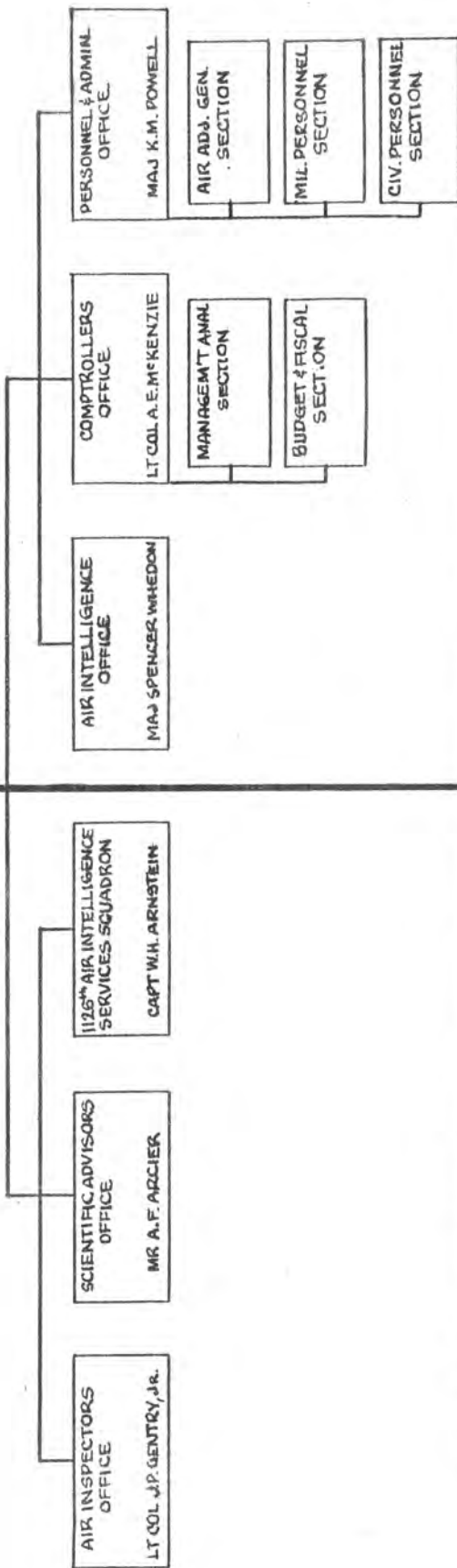
United States Air Force, dated 1 June 1951

TAB B - Organizational Chart, Air Technical Intelligence
Center

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AIR TECHNICAL INTELLIGENCE CENTER
 HEADQUARTERS US AIR FORCE
 1 JULY 1951

COMMANDING OFFICER
 COLONEL FRANK L. DUNN
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