The Anatomy of

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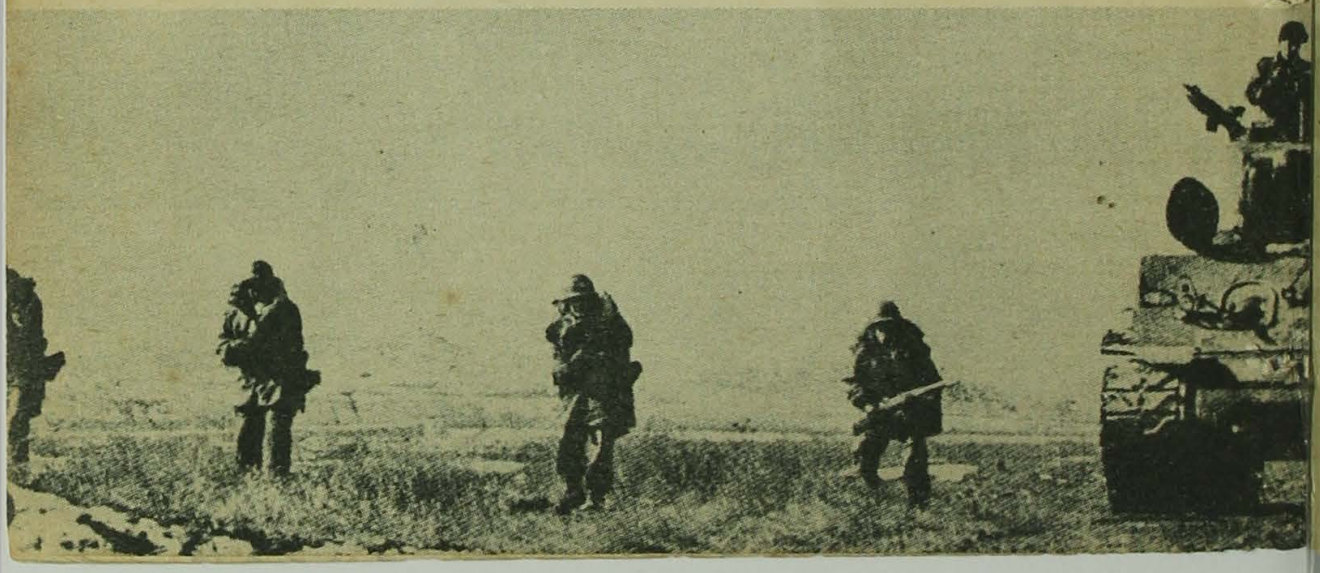
SOUND system of air-ground coordination is essential whenever elements of the Air Force and an Area Command participate in a joint operation. There must be a rapid and an uninterrupted flow of current intelligence and other information between the two in order to achieve maximum effectiveness of air-ground operations.

Landings on Leyte beginning October 19, 1944 were marked by the almost-perfect coordination of land, sea and air forces of both the United States Army and the United States Navy, with the forces working as one magnificent team. Air forces covered the operations that took General MacArthur to Manila, Bataan and Corregidor.

General Dwight D. Eisenhower, supreme commander of the allied expeditionary forces, organized his armies on the European Continent by attaching to them tactical air units. In a report of invasion operations between D-day on June 6 and August 25, 1944, he said, "the air support of ground forces has been most effective throughout the campaign. The supply and maintenance services have performed miracles."



Air-Ground Coordination

. When General Mark Clark's army entered Rome, he stated that the Twelfth's "splendid air effort had enabled us to show the enemy how irresistible the air-ground combination can become."

All these go to show that effectiveness of air effort is of utmost importance to ground forces.

But tactical air operations are not an isolated phase of a battle. They must be carried out in close conjunction with ground operations. Their success cannot be judged by the number of planes employed or the number of missions sent over a front, but only by how well the overall battle plan is carried out.

This article is an informational on air-ground coordination. It is aimed at acquainting **Journal** readers on the different phases of air-ground coordination.

Definition Of Terms

Aerial resupply. — Supply, other than that initially carried into combat, delivered or destined to be delivered by aircraft.

Bomb line. — A line, designated by the ground forces, beyond which visual or electronic control of individual air attacks is not mandatory, and behind which air units may attack only when the attack is cleared by appropriate ground forces and the aircraft are in contact with a Tactical Air Control Party (TACP).

Maximum ordinates (of artillery or naval gunfire). — The highest altitude reached by a projectile, in relation to the surface of the earth.

Processing in the order of events involves the analysis and evaluation of elements of information pertinent to the mission desired.

Air-Ground Operation System. — This system includes all ground and air personnel and units participating in air-ground operations at all echelons of command.

Air Component

The air components of the system consist of specially assigned air force units of the Tactical Air Control System and the tactical components of the Philippine Air Force.

The Tactical Air Control Group. — The Tactical Air Control Group is the focal point of the system in an area command. It is an air-information, communications and control center and has no command functions

other than those specifically delegated. Responsible for the operation of the Tactical Air Control System and the execution of the assigned functions of the Tactical Air Control Group is a Combat Air Operations Officer. He represents the Commanding General, PAF in each area command and through him, the Commanding General, PAF controls all tactical air activities of the tactical components of the PAF.

A Tactical Mobile Control Team is assigned to the Tactical Air Control Group as the communication agency to maintain liaison with the air and ground components of the air-ground operations system. Liaison aircraft are assigned to the Tactical Air Control Group to assist in visual reconnaissance, airborne coordination and control, air evacuation and courier missions. The Combat Air Operations officer, through the Tactical Air Control Group, performs the following functions:

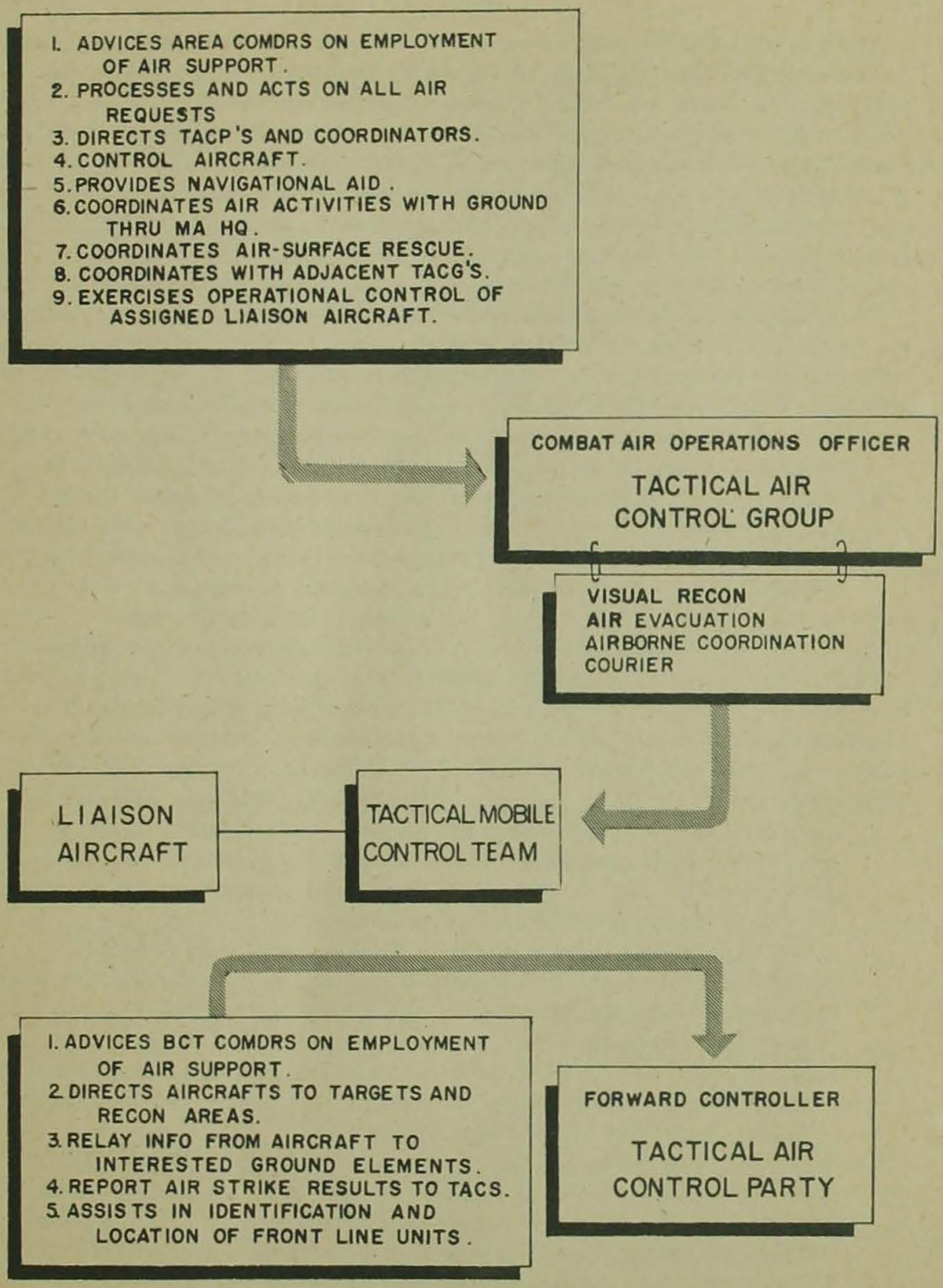
1. Advises the Area Commander on matters pertaining to the employment of air tactical components and recommends air support necessary to attain ground objectives.
2. Processes and acts on all requests for air support.
3. Directs Tactical Air Control Parties and Coordinators.
4. Controls aircraft.
5. Provides navigational aids.
6. Coordinates air activities with ground activities through Military Area Headquarters.
7. Coordinates with air-surface rescue agencies.
8. Coordinates with adjacent Tactical Air Control Group.
9. Exercises operational control of assigned liaison aircraft.

The Tactical Air Control Party (TACP) is a team, specially organized to direct close air support strikes in the vicinity of forward ground elements. It is a highly mobile element having air-to-ground communications to sector aircraft to targets and point-to-point communications to the TACG, supports BCT Headquarters and forward elements of supported BCTs.

The Forward Controller is an experienced-rated military pilot and is familiar with the problems of tactical air strikes against ground targets. He is responsible for the operation of the Tactical Air Control Party and the execution of all assigned functions.

Through the Tactical Air Control Party, the Forward Controller performs the following functions:

1. Advises the BCT Commanders on matters pertaining to the employment of air tactical components and recommends the air support necessary to attain ground objectives.
2. Directs offensive air support aircraft to targets in the vicinity of friendly positions and direct visual reconnaissance of specified areas.
3. Receives information from reconnaissance or other aircraft for transmission to interested ground elements.
4. Reports the observed results of air strikes to TACG.
5. Assists in the identification and location of friendly frontline units.



TACTICAL AIR CONTROL GROUP

An Airborne Coordinator is an experienced Forward Controller who performs his functions from an airplane. He is utilized to provide aircraft control during those operational situations when air alert aircraft are provided and under which the normal system of tactical aircraft control cannot operate efficiently.

The primary function of the Airborne Coordinator is to control and coordinate close tactical air support strikes. This generally includes:

1. The coordination of aircraft in attacks on targets as required.
2. Radio report of target damaged (when possible).
3. The location of targets and the direction of fighter aircraft into such targets.

Ground Component

The ground components of the system consists of all units and headquarters involved in air-ground operations. Ground components shall be responsible for:

1. Security of specially-assigned Air Force units assigned with the area.
2. Providing ground observers to assist the Airborne Coordinator or friendly aircraft in target designation and identification.
3. Submitting requests for air support.

The Air Support Categories. — Air support is divided into three; namely, offensive air support, reconnaissance air support, and transport air support.

1. **Offensive Air Support.** — This type consists of the application of ammunition by aircraft upon the enemy as follows:

a. General Air Support which includes the interdiction activities of the air force in the furtherance of a surface campaign. It is given to ground forces by action against enemy surface objectives other than enemy ground forces actually engaged in the battle area or projected battle area.

b. Close Air Support which includes those air force activities undertaken in direct support of ground forces to assist them in the accomplishment of their immediate task in the battle area. Close air support missions are closely integrated with the fire and movements of the supported ground force elements, such mission being ordinarily performed in targets in the immediate proximity of friendly troops.

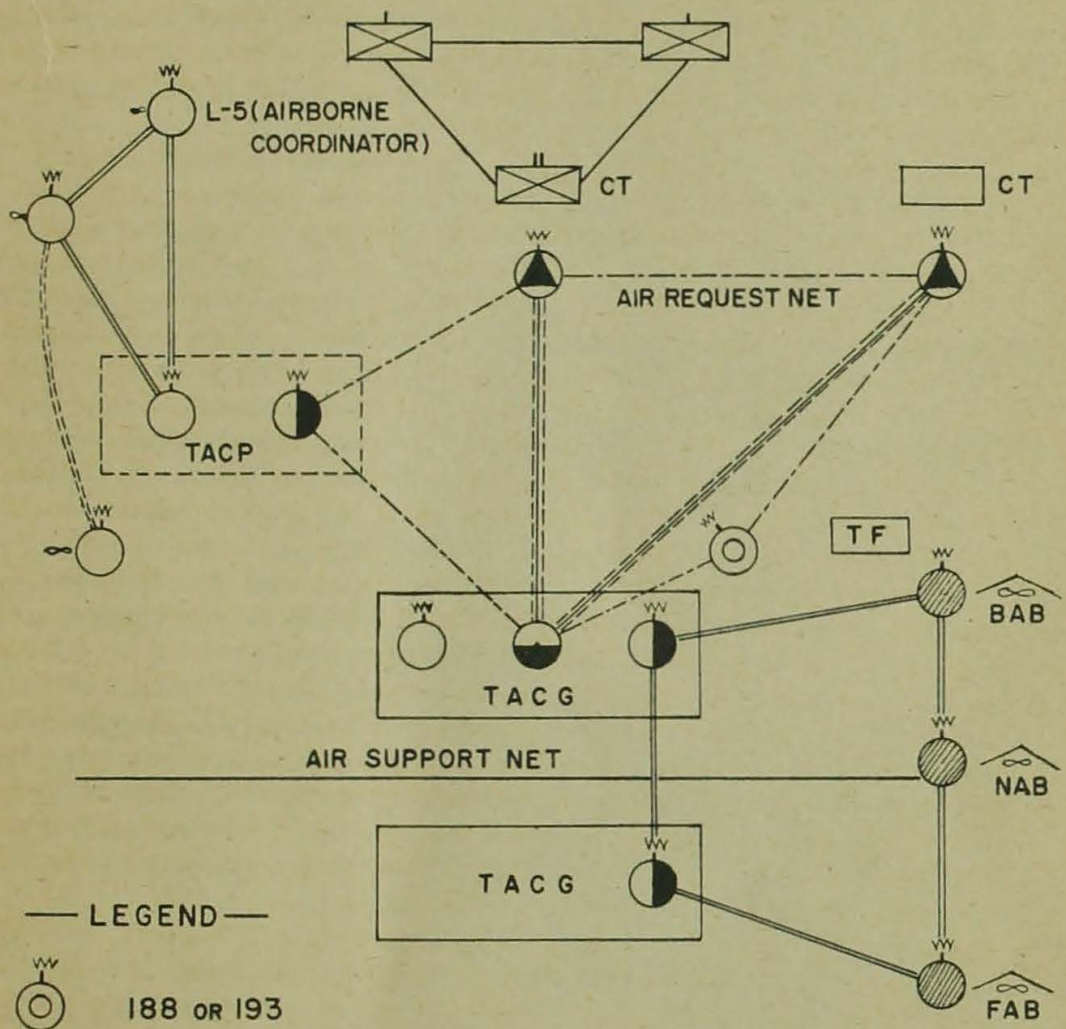
2. **Reconnaissance Air Support.** — This is provided for the purpose of obtaining such information on friendly and enemy disposition as would be of value in planning and executing operations, including information on terrain, hydrography, lines of communication, installations, concentrations and movements and weather conditions.

3. **Transport Air Support.** — This is provided ground forces through the air lifting of personnel, equipment and supplies including participation in airborne operations, and the conduct of air drops and evacuation of casualties.

GENERAL EMPLOYMENT

1. **The Air Request.** — The success of air mission often is dependent upon adequate target information being provided the Tactical Air Control Group. Air requests must include sufficient information to permit determination of force, arma-

RADIO NETS, AIR-GROUND OPNS



— LEGEND —

188 OR 193

694

193

399

542 OR 522

543

ACTUAL TRANSMISSION OF REQUESTS

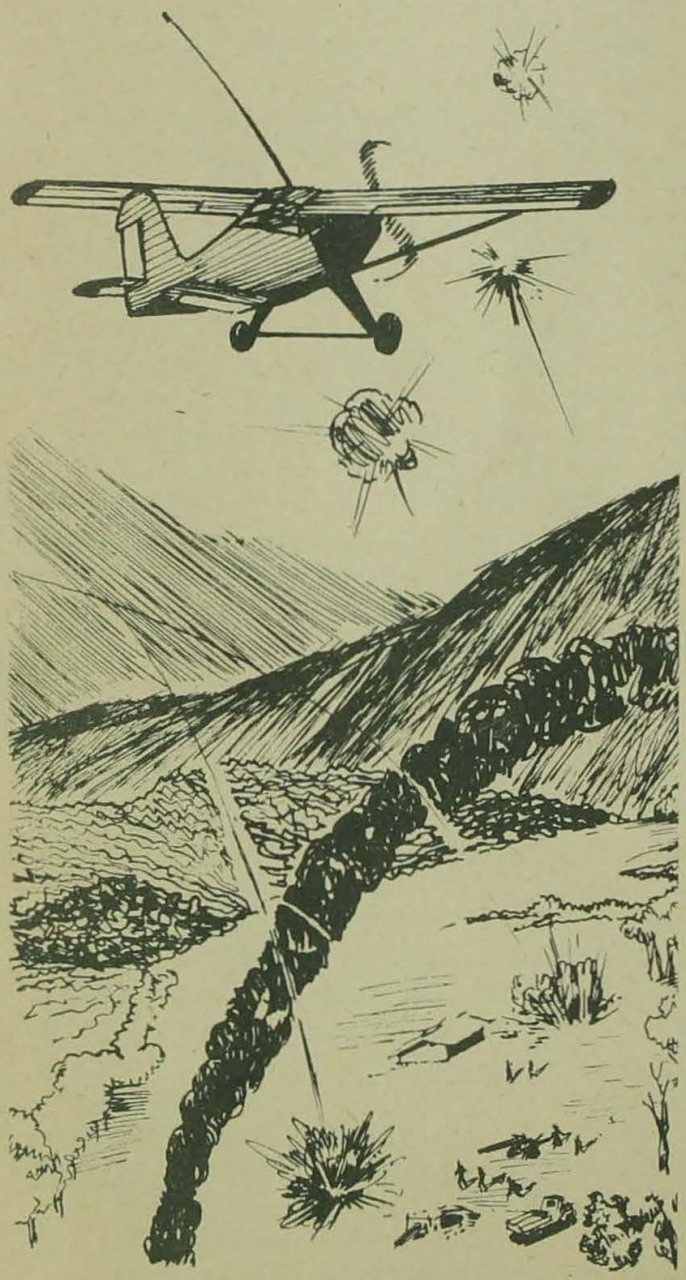
MONITOR

TCMT VECTORS FLIGHT TO TACP NOTIFIES ARRIVAL BY H.F. OVER AIR REQUEST FREQ

PLANE TO PLANE OR PLANE TO GROUND CONTACT

AIR SUPPORT NET

ment, and equipment requirements. Echelons initiating requests for tactical air support must include in their requests all pertinent information available at those echelons. Additional pertinent information is supplied at appropriate higher echelons. As much as possible, complete information is submitted to the Tactical Air Control Group, on prescribed forms whenever practicable.



2. **Offensive Air Support.** —

a. General Air Support. — These are generally planned at Area Headquarters. The interdiction program is prepared at Area Headquarters and includes the following types of missions:

(1) Armed Reconnaissance. — A fighter mission which searches a designated area and attacks all suitable targets found beyond the safety lines designated. This type of mission allows considerable freedom of action and are often highly remunerative. However, it requires careful clearance of areas designated as targets. Responsibility for clearance will remain with Area Headquarters.

(2) Bombing missions. — These missions are carried out by fighter bombers to destroy concentrations of troops, supplies and equipment.

(3) Close Air Support. — The following Air missions are associated with close support operations:

(a) Column covers missions. — These protect vehicular columns of friendly ground forces from enemy attacks. If enemy resistance is expected to be light, reconnaissance aircraft perform visual aerial reconnaissance to the front, rear and flanks. If heavy

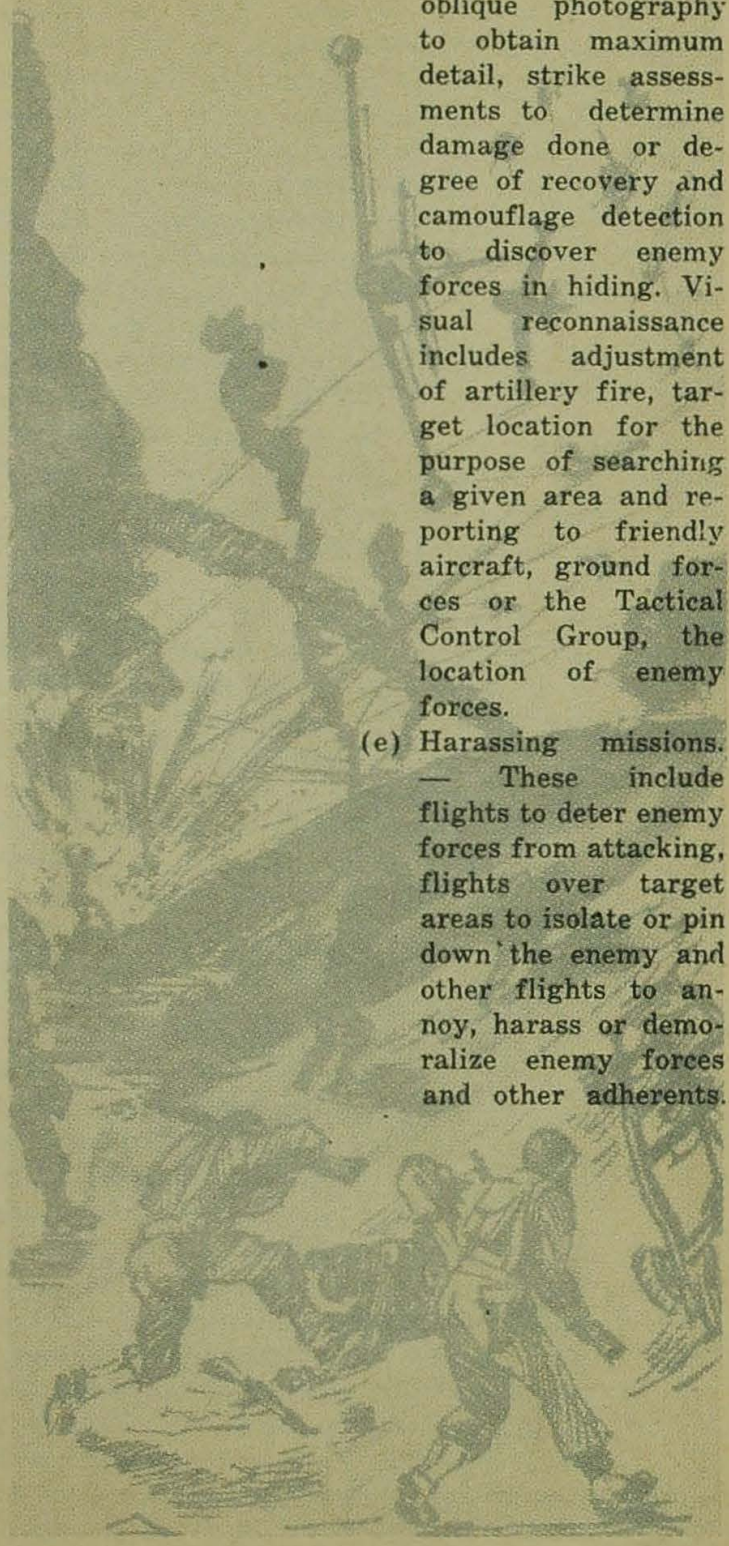
enemy resistance is expected, fighter aircraft are employed to attack enemy ground forces impeding or threatening the progress of the column. These will be used only when the importance of the mission of the column warrants.

(b) Bombing missions. — These are employed in close support operations to destroy strong points, concentrations of troops, equipment and supplies. A Tactical Air Control Party is usually located with forward troops or at any vantage point suitable for proper observation and control of fighter bombers employed. Coordinators may be used to supplement Tactical Air Control Parties as the situation requires.

(c) Air-to-ground Strikes. — These are the backbone of close air support. Targets are generally gun positions, troop vehicles, and other equipment.

(d) Reconnaissance. — Photo reconnaissance in close support operations includes pin-points of predetermined points, oblique photography to obtain maximum detail, strike assessments to determine damage done or degree of recovery and camouflage detection to discover enemy forces in hiding. Visual reconnaissance includes adjustment of artillery fire, target location for the purpose of searching a given area and reporting to friendly aircraft, ground forces or the Tactical Control Group, the location of enemy forces.

(e) Harassing missions. — These include flights to deter enemy forces from attacking, flights over target areas to isolate or pin down the enemy and other flights to annoy, harass or demoralize enemy forces and other adherents.



4. Reconnaissance Air Support. — These take the same aspects as reconnaissance missions performed in close and general air support operations. Limited uncontrolled vertical and oblique photography is possible. Limitations on aircraft and equipment do not permit the execution of controlled photo reconnaissance missions.

5. Transport Air Support. — This support includes the following:

a. Airborne. — airborne support utilizes cargo type aircraft to transport airborne troops and equipment to a designated location. If troops are airlifted and dropped by parachutes, general and close air support must be provided. Generally, equipment and supplies will be dropped by parachutes. These aerial resupply require the maximum in planning, coordination and timing.

b. Air Transport. — These missions are performed where the time element is critical or as the tactical situation requires them. Troops, equipment and supplies are airlifted and landed at airfield nearest battle areas.

c. Air Evacuation. — These are performed in conjunction with other missions, such as air transport. Patients evacuated generally require special hospitalization facilities which must be made available in the shortest possible time.

Communications

The Tactical Mobile Control Team is the communication component of the TACG. It is manned and equipped to permit 24-hour operation of the following:

1. Net on HF with Task Force Hq, TACP, BCT's supported by TACP.
2. Net on HF with PAF major bases.
3. VHF contact with aircraft.

The Tactical Air Control Party is jeep-monted to achieve high mobility and permit it to operate close to front elements of supported ground forces. It is manned and equipped to permit daylight operation of the following:

1. Net on HF with supported BCT's, TACG, and Task Force Hq.
2. VHF contact with planes.

The air request net will be used only for the following traffic employment of communications:

1. Air requests.
2. Approval of air requests by TACG.
3. Cancellation of air requests.
4. Notification by TACG to TACP of status of approved air missions.

Requests for pre-planned missions will always be sent in cryptographic form. Requests for immediate missions may be sent in clear.

CW (A-1) or voice (A-3) will be used for transmission over the air-request net.

CW (A-1) or voice (A-3) will be used for transmission over the air-support net.

Voice (A-3) will be used for air-to-air and air-to-ground contact.

In case two or more TACP's are operating simultaneously, TACG monitors both their frequencies conti-

nuously and issues appropriate instructions over two or more corresponding separate frequencies. A TACP may be used as relay in cases where there are communication difficulties between TACP's in distant battle areas and the TACG.

Separate SOPs governing air-ground communication will be prepared by the Chief Signal Officer for distribution to units concerned.

Procedures For Employment

Standing Operating Procedures and instructions will govern procedures for the employment of the air-ground operations system.

Pre-planned missions. — The Combat Air Operations Officer will attend planning conferences at the Area Headquarters and recommend the Air Operations Plans to support the operations contemplated. He recommends air support that is proper and feasible and establishes priorities for such air support. He coordinates with representatives of other supporting arms and notifies air units concerned of the air support missions required. Upon acknowledgment by the air units, he notifies the Area, liaison agencies, and TACPs. He directs TACPs in the area to move out to projected battle areas. The support aircraft, after clearing their bases, report to the TACG for identification and exchange of information. TACG then directs the aircraft to the TACPs concerned.

The Forward Controller with the TACP contacts the air support leader for transmission of new instructions or confirmation of previous instructions. He designates and identifies targets if necessary, indicates positions of friendly troops, bomb lines whenever applicable, and transmits other information.

The Forward Controller controls and directs supporting aircraft and gives on-the-spot strike assessment reports if possible. Whenever normal ground observation is impossible, he controls and directs aircraft by using airborne coordinators or becoming an airborne coordinator himself. Open communications must be established with supported ground units during the period air support activities are carried out. Upon completion of the mission, the aircraft clear TACPs, TACGs and return to their stations.

Immediate Missions. — These missions are those for which needs can not be foreseen. These result from requests by ground units for immediate help from the appearance of unexpected threats. Subordinate units of a BCT transmit the requests to the BCT through normal command channels. The BCT Hq processes the request to determine if a more economical means such as mortar or artillery support is available to do the job. If approved, the request is transmitted direct to the TACG over the air-request net in clear. TACG either approves or disapproves the mission. Intermediate headquarters monitor the air-request channel. Silence on the part of intermediate headquarters means approval of the request.

In cases where air alert aircraft are provided, TACGs or TACPs having control of such aircraft will immediately direct such aircraft to the targets and inform the BCT of the action taken. TACG may disapprove the action of TACPs in this case.