TAC AIR WARFARE

S.E.A. BRIEFING

1. Our purpose (1) tonight is to portray some aspects of tactical air warfare as conducted in support of the conflict in Viet Nam. We do not intend to consider policy, for this is the province of our Government in Washington. Any views expressed are strictly our own and need not represent the official view of the US Air Force or the American Government. The photography used in this presentation was made between 1965 and 1969 in the United States and various locations in Southeast Asia, and has been put together to represent my tour in the combat area.

2. The Viet Nam conflict is/was fought, (2) for the most part, in rugged terrain. With marshy lowlands near the coast and river deltas, and (3) jungle covered mountains inland, Viet Nam is an ideal location for waging guerrilla warfare. The (4) marshes and rice paddies, with dikes between them, are an effective obstacle to mechanized ground warfare; the thick jungle inland, combined with the eroded (5) limestone mountains called 'karst', which are reminiscent of lunar landscapes, make massed movement difficult, (6) if not impossible. One of the most effective means of carrying the war to the enemy in this terrain is airpower.

3. As (7) a vantage point from which to view the air war in Viet Nam, we will use an airborne command and control squadron. The mission of this unit was to act as a forward extension of the commander

in controlling all aspects of the air war in a designated area. Utilizing current information from a variety of sources, the airborne command center can use available resources in aircraft and ordnance to the best possible advantage in fulfilling military requirements and react quickly to changing situations such as Khe Sanh and Ashau Valley.

4. This (8) squadron flew Lockheed C-130E Hercules aircraft similar to those flown by the RAF. To make this versatile cargo aircraft into an airborne command center, LTV Electrosystems designed and built (9) the Airborne Battlefield Command and Control Center (or ABCCC), an encapsulated system that can be used in the air or on the ground, and is easily transportable. With (10) a wide variety of radio equipment, the ABCCC personnel can keep in contact with the multitude of aircraft and ground stations necessary to keep the air war operating. The (11) capsule contains 20 radios, 16 operator and command staff positions with select, private and common intercoms between positions, plotting boards, two protected voice circuits, automatic relay on all 20 radios, rest area, (12) galley with hot and cold running water, oven, flush-type lavatory and an integral environmental control unit. The interior of the airborne control center incorporates human engineering concepts in order to increase crew efficiency during the extended missions. (12A)

START MOVIE

5. Based at Udorn Royal Thai Air Force Base in northeast Thailand, the ABCCC unit was ideally located, being but a short flight from

Viet Nam, yet having excellent facilities for off-duty relaxation free from constant threat of attack. Udorn, the largest city in the region, is a typical Oriental mixture of ancient and modern. Narrow dirt roads lead to modern housing compounds, and metalled streets carry pedicabs and elephants as well as the latest sports cars. The city is a hub of commerce and the never-ending traffic is as bad as any city in Europe or the States. It is also a center for Thai counter-insurgency operations against the local cong terrorists, and the focal point for the development of Northeast Thailand.

6. Lumber and produce, especially rice, are sent south to Bangkok from Udorn, while finished products come into the city. Too, there is heavy traffic in supplies for the bustling air base on the outskirts of the city. Most of these goods are carried by trucks decorated as dragons, and the rest by railroad or plane. The many stores provide all the necessities and luxuries found in any modern city, and the native Thai foods and supplies provide a wonderland of smells and tastes to the Westerner. Travel around the city is inexpensive, with taxis charging two shillings and pedicat rides being dependent upon the bargaining ability of the would-be traveller. Udorn boasts three theatres and numerous restaurants and nightclubs; the many excellent hotels cater to tourists and also to some airmen who are authorized to live on the economy. Off-duty hours can also be well occupied on base with the various clubs and facilities. These include theatres, swimming pool, games rooms and hobby shops. Even duty hours occasionally come up with some interesting assignments, such as preparing the squadron entries in a base parade. (five seconds pause)

7. Now to follow the mission. After pre-flight briefings, the Air Battle staff collect their survival vests so they can cope with the unexpected. Equipment in the vest is intended to help a man survive on the ground until he is picked up by rescue forces, or until he finds his way to friendly Vietnamese or American positions. Among the many items included in the vest, the most important is the radio - for this is the primary means by which the survivor can contact the rescue forces, and indeed help direct his own rescue.

8. Loading the many pounds of manuals, maps and checklists for the mission onto the truck, the crew departs for the aircraft. The normal complement of personnel was twelve in the capsule crew plus four in the flight crew. The capsule crew consisted of flight commander (or senior controller), who was normally a colonel (equal to an RAF Wing Commander), operations officer, four aircraft controllers, four radio and maintenance technicians and two intelligence personnel. There is enough room for four more controllers, bringing total capsule complement to sixteen.

9. Once the crew are aboard, the four turbo-prop engines are started and the ground power carts are pulled away. As the aircraft pull out of the revetments, their great weight can be seen by the way they sit back on the landing gear. Each plane has a take-off weight of approximately 163,000 pounds, consisting in part of 62,000 pounds of fuel and 20,000 pounds of capsule. Normal take-off weight is 155,000 pounds. The wingspan of the 130 is 132 feet and length is

97 feet. Normal cruising speed is 340 mph, though the ABCCC birds loiter in orbit around 250mph. The flight deck and cargo compartment are pressurized and air-conditioned. The Herky Bird has carried as many as 200 passengers in emergency evacuation missions in Viet Nam, and has been a key factor in support of besieged outposts such as Khe Sanh and Kham Duc. Different versions of the aircraft are also used as gunships armed with 7.62 and 20mm gatling guns, air rescue, weather recce, photo mapping and target drone launchers. As the aircraft roll down the runway on the start of the thirteen to fourteen hour flight, one can again appreciate the great weight as it takes some forty-five seconds and 7,500 feet to get airborne. Keep in mind, however, that the temperature is near 100°F and humidity about 99%, thus requiring longer take-offs than normal. We see here a take-off from both outside and then within the aircraft. Armco-clad revetments can be seen behind some rescue helicopters landing as the ABCCC takes off... During take-off, both pilots are watching the controls, ready to take corrective action should anything go wrong. The flight engineer is watching the instruments to make sure all systems are functioning properly, and the navigator is already working on getting the aircraft to the proper location in time and space.

10. Leaving Udorn, the planes fly low over the Thai farmlands, not far above the numerous and fertile rice paddies that provide Thailand with her major export and staple crop. (ten seconds pause) Once safe airspeed and altitude are achieved, the air battle staff

prepares to assume station. The operations officer and 'high controller', who works the fighters, plan how they are going to handle their assigned sorties, matching ordnance against targets and keeping planes separated... The intelligence specialist plots the assigned targets and other pertinent information on the boards so that the battle staff can see the current situation in a glance... The radio/teletype operators contact the aircraft being relieved and the ground stations with which they will be working during the twelve hour tour on station. (Clear communications were a must and without them little could be accomplished....)

11. Aircraft assigned to the Airborne Command Center take off from various airbases and include such plans as the F-100, F4 and F-105 Fighter-Bombers, O-2 and OV-10 observation planes, HH53 Helicopters and HC-130P. Hercules rescue control aircraft which has the capability of refueling helicopters in flight and is demonstrated here.... Entering the area at this time after receiving clearance from the ABCCC is a forward air controller or FAC who will be doing the target acquisition for the strike aircraft who fly too fast to find the hidden targets themselves. Flying in a slow, unarmed, twin-engined Cessna O-2, the FAC will use the strike aircraft on a predesignated Vietnamese Army-authorized target, or will get authorization through the ABCCC to hit a lucrative target he may find along the trails and rivers in his area. (This was part of a rigid control system to keep air strikes from going astray.) Off in the distance, another FAC is working a strike on a truck park near a river. Enemy traffic moved mainly at night, and the trucks parked under the

jungle canopy during the day.

12. Going to his first target assignment, the FAC watches for a B-52 strike so he can render bomb damage assessment (BDA). Miles above the FAC, a cell of three B-52s can be seen approaching on their run-in on target. As the big stratofortresses bomb by radar from high altitude, there is no need for the forward air controller to mark the target. With Combat Air Patrol interceptors flying overhead to protect them from possible hostile aircraft, the B-52s release their ordnance - each plane dropping more than 100 bombs of the 500 and 750 pound variety. One method of bombing is called 'Sky Spot'. The mobile Sky Spot radar, using pinpoint map coordinates of the target - prestored in the memory bank of a computer - provides a course for the aircraft to fly. The ordnance, ballistic data, weather and other factors are then also fed to the computer, which then provides a bomb release point. When the ordnance explodes, dirt and smoke go thousands of feet into the air, and the FAC can see that the bomb train walked right through the enemy storage area. (Pause)

13. Slowly moving along trail networks, the FAC searches the area for signs of enemy activity. He constantly 'jinks' so that gunners on the ground can't get a good shot at him. Scars in the jungle show where strikes have been directed several weeks earlier, but there is no sign of the Viet Cong now - however, the jungle is excellent camouflage. Nearing his target, the FAC tests his marking rockets to see if they and his sight function properly. The terrain

below him can vary greatly, from the relatively flat river valleys to high table mountains, to exotic and inhospitable karst formations. (twenty seconds pause)

14. A flight of four F105 fighter-bombers has been sent over to the FAC by the Airborne Command Post and he begins to put the bombs on an interdiction point. The idea is to knock the karst formation down across the road, thereby stopping traffic and preventing supplies from reaching the enemy further inside Viet Nam. The four aircraft, bombing singlely under control of the forward air controller, release their ordnance. (ten seconds pause) Calling on ABCCC he requests a reconnaissance aircraft to run the target area so photo interpreters can determine whether further action need be taken for the present. His time on station over, the FAC checks out with ABCCC and heads for homebase.

15. During a lull in activity, some of the ABCCC crew take time for a meal. With a choice of five box lunches and five frozen meals, they had a good selection of food available. In addition, some crew members brought their own food that they had purchased in the base exchange (NAAFI).

16. About this time, a plane on a resupply mission to an isolated area in Viet Nam reports a friendly fort is under enemy attack. The local commander sends his counter-insurgency aircraft in to support the fort. These planes are well suited to this type of operation because of their low speed and long loiter time over target. (Pause) They are not of sufficient numbers however to stop the attack and

the commander asks USAF for help. ABCCC scrambles fighter-bomber aircraft and assigns them to work with a FAC who is in contact by radio with a forward air guide or FAG in the fort. Working with the spotters, the aircraft strike Viet Cong positions and supplies. Their bombing runs are made so as to preclude accidental release on friendly forces. One aircraft strikes a petrol dump and gets a direct hit.

17. The ABCCC flight commander and operations officer now confer on how best to support the Vietnamese fort since night is coming and the monsoon rain storms are in the area. It's decided to send in a C-123 flareship/FAC with A-1s and A-26s. These propeller driven aircraft are best suited to this sort of environment and action. Following is an abbreviated replay of an actual night action in which the aircraft worked with the man on the ground to accurately locate the enemy positions and strike them. The call-signs used are:

Candlestick 42	-	Flareship
Nimrod 26) Yellowbird)	-	Attack Aircraft
Alleycat	-	ABCCC
Red Hat	-	Ground spotter.

1. Candlestick 42 this is Nimrod 26 coming in at Base plus four with standard load. Alleycat said you have some work for me.

2. Roger Nim 26. Candle's at base plus two in a left-hand orbit. Red Hat has Bad Guys attacking his outposts from the north. My last set of flares was over the friendly position. Do you have them in sight?

1. Affirmative Candle....Red Hat this is Nimrod 26, I have bombs for you; where are the Bad Guys from your position?

3. 26, Red Hat, enemy is one klick northwest of the big building. They're in the clearing where two rivers coms together. They have two each DK-82s and some B-40 rockets.

1. Roger... Candle can you drop some flares there - about 320 for one klick from the big house.

2. Affirm. I'm making my run now.... (14) Flares out.

1. Red Hat, 26, How are those flares?

3. Pretty Good, but put next flare 200 meters east.

1. Roger, 200 meters east.

2. Candle Copies... Running in now.... Flares out.

1. Okay.. Red Hat, Nim 26, How's that?

3. Real good, right over the mortars.

1. Roger. Candle, 26, how about dropping a Marker under your last flares?

2. Can do.... (15)

1. Red Hat, can you see the Marker on the ground?

3. Affirmative, strike 50 meters from Marker on bearing of 090.

1. Copy. 50 meters 090. I'm in on target now..... (16) Red Hat, Nim 26, how was that strike?

3. Pretty good 26, put next bomb 150 meters south of last drop, the B-40s are in there.

1. Roger... Nim 26 in on target.... (17)

3. 26, Red Hat. Pretty good, pretty good, keep hitting in the same area.

2. Candle dropping lights.... (18) flares out.

1. 26 in.... (19) I'm off.... Nim 26 running in again.... (20) How's that Red Hat?

2. Candle dropping flares.

3. Real good 26. Keep in same place.

1. Roger. Candle, 26, all I've got left is .50 Cal. Alleycat got any more ordnance on the way?

2. Affirm. Alley's got two A1's orbiting five miles south, and a Yellowbird coming shortly.

1. Outstanding... Nim's in on target (21)..... I'm off target and coming around again (22) ..... 26 off. (23) Red Hat, Nim 26, has no more bombs - I must go now. Hope I helped you.

3. Roger, Roger, 26, you did good work for me. Thank you much.

1. Okay Red Hat. Maybe we'll see you tomorrow. Good nite. Candle, 26, I'll be going over to Alleycat Freq. Thanks for the good flares, any BDA for me?

2. No sweat Nim. You got three secondary fires at coordinates 135642, and a secondary explosion at 136639, looked like an ammo bunker.

1. Thanks much Candle. 26 going Alleycat.

18. With the coming of dawn, (24) the enemy finally was beaten back and the friendly position secured. Now was time for the ABCCC to debrief to the relief aircraft and then head for home (25) thus ending another mission.

19. Tonight we have tried to show you some different aspects of aerial warfare as seen in Viet Nam. In particular, we have tried to show just one part of the extensive tactical air control system utilized to maintain maximum control over all air strikes. This system was designed to obtain maximum results and extreme accuracy from the available aircraft, and to prevent damage to neutral and friendly positions and civilian personnel. If there are any questions, we will be happy to answer them at this time. Thank you.

ALTERNATE NARRATIVE FOR DIALOG SECTION

These propeller driven aircraft are best suited to this sort of environment and action. The following narrative is based on an actual night action in which the aircraft worked with the man on the ground to accurately locate the enemy positions and strike them:

As (13) night came on, the Airborne Command Post sent a C-123 flareship to the beleagured outpost. Flares enable the friendlies to locate the enemy, and also act as a powerful psychological deterrent on the enemy troops.

A short time later, an A-26 was sent by ABCCC using the flares, the attack plane homed on the area after checking in with the flareship so the two aircraft would not interfere with each other. Next, the A-26 contacted the ground operator and began to locate the bombing point. (14) Using flare position and identifiable ground features, the Forward Air Guide put the A-26 over the enemy positions. At this point, the flareship put down (15) a ground marker or 'Log' so the aircraft would have a readily identifiable reference point. Using the 'Log' as an aiming point, the first ordnance was delivered (16). The FAG then gave corrections and another drop was made(17). With location (18) of enemy positions pinpointed, the attack plane made repeated (19) runs dropping varied ordnance.

With hard ordnance expended, the A-26 asked the flareship to get

more aircraft from ABCCC. He was advised that two A1's were already in holding orbit five miles south. Again after clearing with the ground FAC, the A-26 made (21) strafing runs against enemy forces.

With fuel at 'Bingo', the A-26 received BDA from the FAC and went over to ABCCC freq to check out of the area and the A1s entered.