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REPORT ON AIRBORNE INTERCEPTION OF ENEMY R/T TRAFFIC
carried out with the Fifteenth Air Force

by

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1. Development of Airborne Interception in the MTO

Airborne interception has been carried out in the Mediterranean Theatre since October 1943. However, only a few operators were trained in the procedures and thus combat missions of the Fifteenth Air Force were only monitored occasionally. In March 1944, Fifteenth Air Force Headquarters interviewed sixty-two soldiers who were classified as being able to understand, speak and write the German language. Eleven of these men were trained in a three week course in monitor procedures. After training, these men were distributed among the various Wings of the Fifteenth Air Force.

The receivers needed for this work were Hallicrafters, S-27. Since none of these sets were available in our Air Force, six sets were borrowed from the 276th Royal Air Force Wing. During the next weeks the monitoring activity was leading a sort of a wallflower existence due to the fact that there was neither an interest on the part of any one organization nor an organization which would conduct the activities of the interceptors. This situation was such that every interceptor began to work his own way through the problems with which he was confronted. These problems were either of a technical or administrative nature. Most of the sets were in poor working condition and necessary spare parts were not in stock. The Bomb Groups did not give the necessary cooperation in installing the sets into the ships. Several groups did not even take enough interest in the matter to assign a ship for this purpose. Their reason was that an order had not been issued directing the Bomb Groups to establish such an organization. On the other hand, no orders could be issued by the Intelligence Department of the Fifteenth Air Force Headquarters since it was not an administrative organization. Since the information secured by monitoring was strictly of interest to the Intelligence Department only, the Bomb Groups did not see any direct value in supporting an airborne interceptor program. This situation resulted, in the greater part, in disaster, and six of the operators were never able to produce any satisfactory results.

The remaining operators, however, developed airborne interception into "a working method of gaining valuable information". Two Bomb Groups in the Fifteenth Air Force, the 97th and 99th Bomb Groups, set up their own organization, and due to the close cooperation of these two groups a system has been developed whereby almost every combat mission is now being covered by at least one operator. On every major mission into Germany or other important targets where strong fighter opposition can be expected, several interceptors fly along in order to cover as many of the different frequencies as possible.

Today we have four operators working out of those two groups which bring back information from every mission and their work has been highly commended by the Intelligence Section for its strategic value, and by the participating groups for the tactical value. A regular bulletin is being issued today by Fifteenth Air Force Headquarters summarizing the interceptor logs and thus keeping the combat crews informed on the actual German

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fighter strength. Operations officers today use material from Interceptor logs to brief the crews for combat missions, citing, for example, the fact that the enemy is on the lookout for stragglers and many other instances. Airborne interception today is an acknowledged part of the Fifteenth Air Force.

This report covers my experiences as interceptor during April until August 1944.

2. Tactical Value of Airborne Interception

In order to gain the confidence and the cooperation of the Bomb Groups with which we were to fly our missions, we had to "sell" the idea of airborne interception. We had to show that airborne interception not only has a strategical value for the Intelligence Department but also aids the Bomb Groups right on the spot during the flight. As interceptors, we developed a warning service for the crew with which we flew which enabled them to benefit from our monitoring.

As we leave our base and proceed toward the target, the interceptor will tune his set on the frequency of our own Allied escort. Here is the first point where the airborne interceptor's information can be of tactical, immediate value. The Halli-crafter set will pick up any traffic within a range of roughly seventy-five miles. Thus he can pick up the chatter of our own escort as they approach our formation. It has happened only recently that enemy fighters gained knowledge of the time and location where the American bombers and fighters were to meet, and instead of our own escort approaching our formation, several German Fockeulfs, resembling our own Thunderbolts, approached our formation and were only recognized as enemy aircraft after they opened fire on our formation. However, if the airborne interceptor can pick up the proper call signs of the day from our own Allied escort, he can notify his pilot and alert the crew to be on the lookout for the aircraft. The Fighters will spot our formation long before we can spot them and thus the interceptor can monitor from their conversation approximately when the gunners should be able to see the escort. Thus the crews can relax on their vigilance and know when to be really alert.

Another example where the interceptor helps actually in execution of the bombing mission is the following:

As we get over enemy territory, the interceptor will put his dial on the frequency on which he most probably expects enemy Radio Telefunken traffic. Soon the first traffic will come in consisting of calls between fighters and ground station asking for radio checks or tuning up. As we proceed, the traffic will grow stronger and louder until the first messages can be made out. At this point, the interceptor will notify the crew of the fact that he has made contact with the enemy traffic, and thus German

planes are to be expected within the radius of approximately seventy-five miles. Now the crew knows that they have to man their guns.

Experience shows that nothing is more strenuous on a combat mission than being in a permanent state of suspense. The knowledge of not knowing what you can expect will wear down the average gunner much more than the actual bomb run or an actual air battle. Airborne interception with its forwarning system did a great deal to relieve combat crews of this suspense. I quote an extract from a letter received from a combat pilot who flew ninety-five missions in the Pacific and European Theatres.

"Since 10 May 1944, Sergeant Gotthold worked under guidance of the Intelligence Department and flew with this Squadron in the capacity of Airborne Interceptor performing a very technical and highly specialized job. While this office cannot pass judgment on his work, he forwarded the formation with information which enabled them to evade enemy action on numerous occasions. His work also served as a great morale booster to the men with whom he flew, giving them greater confidence."

The Airborne Interceptor made it a point to keep the crews informed on his work. The crews could depend very well on the predictions of the monitor. Every time the interceptor predicted attacks they came at the precise moment. On the other hand, whenever the interceptor assured the absence of enemy fighters none were reported by our own or any other formation. This type of "spotting" helped a great deal to make the idea of airborne interception popular with the Bomb Groups and it became more than a source of information to the Intelligence Department. Interception became a matter of tactical help to the air crews right at the spot during flight. Another tactical help of the interception work is an occasional warning on flak areas. On one occasion a message was picked up from the German ground station telling the fighters to trail the enemy bombers but to leave them at a certain spot in order to avoid the flak of that area. On another occasion the stoolpigeon actually called a flak area and gave them strength and altitude and heading of our formation.

On a raid over Vienna this operator picked up a message from the Germans in which they called out the fact that a Fortress had been shot down. At that time there was an overcast over the target and the crippled Fort with its crew disappeared soon in the clouds. After our return to the home base the air crews reported that three men were seen bailing out of the struck ship. However, the log of the airborne interceptor showed at exactly the same time when the crash occurred, the following message: "---- Da fallen acht Pilze aus den wolken----" which, translated means "Eight mushrooms are falling out of the clouds". In other words some German plane spotted under the clouds eight parachutes. Thus we were able to furnish more exact information to our Prisoner of War files. Our losses are being substantiated by the enemy.

Very often victory claims over enemy ships are being made by several gunners. Thus our total claim often exceeds the actual amount of destroyed aircrafts. However, when a German fighter is being shot down or crippled, the Germans comment on it or notify their stoolpigeon. Again here the airborne interceptor is of value in confirming our actual victories.

All the above examples have proven themselves in actual combat and made airborne interception a desirable functioning among the Bomb Groups. Within the Bomb Groups is a constant fight for the privilege to fly the "Interceptor ship".

3. Recommendation on Tactical Interception

At present our formations adhere strictly to the "radio silence" order. No interplane communication is allowed until "bombs away" and from then on only very important messages may be exchanged. No effort has been made to develop a code or signalling system to transmit the received information to the rest of the group or even the whole Air Force. Information as to when the enemy pinpoints our formation, on fighter movements, indications that attacks might be expected, location of flak areas, presence of enemy fighters within a certain area should be made available to the whole formation. At present all this information is recorded in the log or told to the crew of the interceptor ship only.

If a code or a signalling system could be developed to transmit this information to the rest of the formation or even to the fighters, interception could be of immense tactical value and a vital factor in saving men and material. At one particular time the interceptor picked up messages in which the Germans indicated that they found a straggling plane and were attacking with three aircrafts. The location of this attack was slightly to the rear of our own formation. Looking out of the window the interceptor was able to actually see this attack and finally see the Fort go down in flames while our own escort was covering the formation on the opposite side. I am sure that a warning to our own fighters could have saved a plane and ten lives. A system like our own Bombercall or Fighter call could be used, or Very Pistol signs in prearranged colors. Here is a part where Airborne Interception needs perfection.

4. Strategic Value of Airborne Interception

All the foregoing examples are mostly of tactical value though they are of interest even after the flight for our Intelligence. Here are some further points on the strategic value of the information received from the German chatter:

At times the German Control station on the ground will inform the

fighter organization in its area of the fact that Allied planes are out on a raid. This is usually one of the first messages being picked up by the interceptor. It serves as a warning for standing by. In that case the German ground station tells openly the source from where it received its information. They either use the word "Wuerzburg reports" or they even use the location of their detection point, like "Wir hoeren von Spalato" meaning "We hear from Split" which is the location of a powerful German RADAR station. At that very moment the interceptor would ask the navigator for a position report and we have information on the range of their RADAR equipment. The latter message was picked up over the home base of this interceptor which is roughly 120 miles air distance from Split, Yugoslavia.

The German ground station, in giving the order for take off to the different fighter groups, will call them by their code name and order their take off. Having this message in the log, the interceptor will at some other time pick up a message in which this particular fighter group will sign off with the stoolpigeon because they ran out of gas. Comparing the time interval of these messages we can get information as to the gas load and as to the length of flights the German aircraft is capable of.

Due to the fact that the German Air Force has large fronts to defend, with an ever decreasing force, they cannot afford to keep sufficient patrols in the air. Therefore, they devised the following system. One plane patrols an area of about 100 miles radius, flying very high in order to evade Allied fighters. This plane is in constant communication with a powerful German ground station of this particular area. As Allied planes approach the area patrolled by this plane, which we will call "Stoolpigeon", he will report our position and our progress to the ground station. The ground station in turn, will chart our progress and decide which fighter groups should take off for the defense and interception. Thus the next call would be from the ground station to the fighter groups giving them take off orders. The fighters then will report to the Stoolpigeon who will not only keep the fighters informed on the situation in the air, but will also direct the battles and attacks. All these calls and conversations can be heard by the airborne interceptor.

The Germans use open language. However, a great deal of their conversation is being spoken in an airborne lingo which is much more developed than our own. For instance, they have a slang word for "altitude", "heading", "speed", "clouds", "bombers", "liberators", "air bases", and many many more. This slang changes from time to time. Old words are being dropped and new words are being picked up.

As an example I would like to give the following incident from a raid over Austria. A German ground station called one of the fighters and asked

the question "Do you see any wallflowers?" The German fighter answered back asking the ground station to repeat the message. This happened several times until the fighter finally said "I don't know what you mean", whereupon the ground station operator replied "Dummkopf", I asked whether you see any stragglers." That shows that the Germans used the word "wallflower" for a plane which is being left behind, just like the girl sitting on the sideline of the dance floor is called a "wallflower". At the same time it gave us confirmation that the Germans prefer to attack stragglers. The Fifteenth Air Force picked up the Germans' challenge, and the bomber pilots are being warned daily not to become a "wallflower".

The above example shows that the German lingo cannot be called code. It merely veils the language and with a little logic it can be deciphered very easily. This is one of the reasons why the airborne interceptors must know the German language one-hundred percent. A few more illustrations of the lingo are: Liberators are called "moving vans"; for German fighters to trail a formation is called "to carry the bride's veil"; P-38s are called "twins", and any American plane is called an "Indian". In general it can be said that the information which we receive is largely a result of the unawareness on the German side that the chatter is being monitored. Otherwise they would not furnish the strategic information as pointed out. Here are some other examples:

Often the interceptor's log will show air attacks and presence of fighters in areas which were not covered by his formation. It even may occur that none of the planes who took part in that particular raid reported any enemy traffic. Later it can be found though that some other parts of the Air Force or even a different Air Force dealt with those enemy aircraft. As an example, I cite a raid to Blechhammer, Germany. During this raid, enemy traffic in great strength was recorded by the interceptor. However, none of the participating planes saw them. Later it was found that the Eighth Air Force staged a raid into the same area and all the traffic concerned them.

The enemy gives us frequent indications of its own strength. We know the set-up of the German fighter organization. We know that every German Geschwader of 45 airplanes is composed of three sub-divisions called Groups, and each Group again divided into three Staffel. All the planes within one Staffel are numbered from one to five. In combat, the Germans use code names for those different groups, and indicate their place within the group by a number. This way we can gather information as to the strength of their fighter groups by frequently comparing the numbers.

The Germans also give us information as to the type of plane which they employ. They call their own single-engine planes "little brothers", and twin-engine planes "big brothers". During the recent months we gathered enough

information to know which fighter groups are single-engine and which twin-engine planes. We also have the code names of most of their fighter formations and their approximate location.

Several times the Germans furnished us with information on our bombing results. Whenever an enemy fighter is ready to land, he will first check with the ground station and get an okay on it. During several missions the German ground station told its fighters not to go back to their home field because it had been destroyed. After having, for instance, bombed an airfield outside of Zagreb, and we hear that the fighter group "Butterfly" should not go back to their home base because it is burning, we know first that the fighter group Butterfly is stationed in Zagreb, and second that our bombing results are such that the air field is non-operational. Other information which we gather in this connection is the location of the air fields. Very often fighters will trail the bombers until they run out of gas. By then they will be too far away from their home base to make it back. Again in this case they call the ground station and ask for landing instructions. The ground station then will tell them where to land, this being given in map grid code. The interceptor can very quickly determine the location of this air field on his own map, and it has occurred that through this type of information new air fields have been charted by the Fifteenth Air Force which were hitherto unreported. In several cases reconnaissance planes confirmed the newly-found air fields after being directed to the locations through airborne interceptor reports.

There are, of course, many more fields and many other ways of interpretation of airborne interceptor reports which are beyond the knowledge of the interceptor but of high value to the Intelligence Department.

5. Training

In order to carry out the program of airborne interception, operators have to be trained for this work. The airborne interceptor should have many qualities of an intelligence officer.

a. He must possess a very thorough knowledge of the language, not only to understand it but also to grasp the meaning of the "double-talk".

b. He has to know enough of the radio set-up to operate his Halli-crafter set.

c. He must possess good judgment to decide on the spot when a report is important enough to be transmitted to the rest of the formation. Any undue alarm could cause more confusion than it would do good.

The training of the operator should include the following items:

- a. He must know the German phonetic alphabet, and he must know the German phonetic numbers.
- b. He should be familiar with conversion tables in order to make quick calculations from kilometers into miles, meters into feet, and litres into quarts.
- c. He must be familiar with the German fighter organization in order to know that fifteen planes are taking off when he hears the word "Group", but only five planes are in the air when he hears the word "Staffel".
- d. He must be familiar with the location and the call sign and the frequency of the German ground stations.
- e. He must be familiar with the reading of the German map grid system.
- f. The airborne interceptor should be able to find coordinates of grid squares, towns, rivers, lakes and other geographical points quickly in order to compare the German calls with the actual position of his group.
- g. A thorough study of map reading is necessary.
- h. The interceptor also should study the reading of magnetic headings.
- i. A thorough knowledge of the German versions of geographical names is necessary in order to know right away which places the Germans are talking about.
- j. An intimate knowledge of the working of his Hallicrafter receiver is necessary.
- k. One of the most important parts of his training includes a thorough study of the airborne lingo. There are new expressions every day, and it is up to the interpreter to use his wits and put proper interpretation into those double-talk phrases.
- l. Last but not least, the interpreter has to be trained to take down all incoming messages as fast as they are being received. He has to develop his own shorthand for those idioms which repeat themselves, in order to be able to keep up. All German traffic which comes over the air should be taken down in the quickest possible way to insure a complete log of the traffic. Only if the traffic comes too fast the minor parts of the conversation should be skipped in order to get the important messages. For instance, words like "roger", "please repeat" and others repeat themselves and have no

significance except when the text really warrants it. Every message should be taken down with the exact time when received. The completeness of the log could be greatly extended of course if the interceptor operator were equipped with an airborne voice recorder. He would merely listen in while the recorder takes down the traffic and transmit the tactical messages to the pilot. Experiments in that direction with the 97th Bomb Group were highly successful; however no recorder has been put into regular service.

6. Technical Requirements

The principal technical requirement is the procurement of a good receiver installed in an aircraft which will assure perfect reception. During the last few months we used the S-27 Hallicrafter receiver. It is an ultra-high frequency receiver with a range from 30 to 140 megacycles. The most part of the German traffic comes in between 38 and 44 megacycles. The S-27 works on 110 volts, and an inverter has to be installed between the set and the ship's electrical source. The set works best with a Gee-type whip antenna, which should be mounted on the ship's body in a 45° angle. Since the S-27 set has not been designed for airborne activity, it does not work very well due to the vibrations of the ship. Therefore, it should be mounted on shock absorbers to eliminate vibrations. If the S-27 has been installed properly, it requires very little maintenance. The S-27 is now available in a form designed for airborne use, and is known as AN/ARR-5. The aircraft in which the set is being installed should be shielded completely because all electrical motors on the ship play interference with the reception. All the wiring should be done with shielded material and the lead from the antenna to the set should be as short as possible because it is here that we pick up the largest amount of interference.

Reports showed that on occasions some interceptors used the BC 348-0 liaison receiver, and obtained German traffic between 3.5 and 5 megacycles. However, this does not indicate that we can use this receiver set because as it later turned out, there is only one single German fighter group who is using this low frequency.

7. German Tactics

The German ground stations are equipped with a very powerful receiver and transmitter. Even in bad weather and during times of difficult reception the ground station will always come through loud and clearly. During my flights in the Italian theatre I have definitely located five ground stations which have an approximate radius of 150 to 200 miles. Several Stoolpigeons work for one ground station and all fighters in that area are subject to orders by the ground station. In one single case did I pick up a report in which the German ground station notified the flak guns in a

certain area to be ready for reception of the bombers. Otherwise I never noticed any information being given by the ground station to the flak guns over the air. The ground station also has jurisdiction over all radio traffic, and at times would order certain fighters off the air or command radio silence if necessary.

The German ground station computes the different reports from all stool-pigeons assigned to it and gives regular broadcasts to their forces. These broadcasts usually start out with the time signal and a heading "The situation in the air", and then they follow this up with giving positions, headings, strength and altitude of different bomb groups in the area. A typical broadcast of this type would look like this: "From Rosenkavalier: 1145: the situation in the air". "Moving vans over Graz heading toward Tulln. Bombs are being dropped over Wiener Neustadt. Big autos retreating south off Lake Balaton. Many small Indians coming north from Zagreb. Look out for the twins." This message indicates that a group of B-24s and groups of B-17s made raids in the Vienna area. The B-17s are on their way home while the B-24s are still heading toward the target. The fighter escort seems to be coming toward the target area as the German indicated that the Indians were coming. Most probably the target area is being covered by P-38s, for which the Germans always showed a holy respect. These broadcasts repeat themselves once every ten minutes, giving the progress of all Groups.

Whenever the interceptor believes that the German fighters deal with his particular formation, he will call his pilot and notify him of this fact. It is up to the pilot then to decide whether this message is important enough to be passed on to the rest of the formation as a forewarning of impending attacks. Here is an illustration: The Allied escort for bomber formation circles around the planes and will be at one time in the front and then in the rear or at either side of the heavies. The German stoolpigeon, being above the bomber formation, will observe the movement of the escort and order his own planes to the rear of the American bombers as the escort would move up to the front. In this case the interceptor would pick up a message of this type: "The Indians small brothers are going to the point; close in on the veil", which would mean that the escort of the American bombers is moving toward the front; go to the rear of the formation. This message would be forwarded to the pilot, who in turn could notify the planes in the rear formation or even our own escort if he were allowed to break radio silence.

Another example of German tactics is the way the stoolpigeon directs the fighters. Once they have taken to the air they "report" to the stoolpigeon. He has meanwhile trailed the American bombers and is in a position to give the fighters direction on how to approach the Allied formation. It has been proven that the stoolpigeon will not order an attack on the bombers if he noticed too many escorts around. Only if their chances are at least

50 percent or better will the German formation attempt an attack. However, in most cases will the stoolpigeon direct a group of his fighters to the end of the formation with the order to "carry the bride's veil" which is a double-talk expression for trailing the bombers, just like the bridesmaid walks behind the bride with the veil. This is for the purpose of picking up any bombers which fall out of the formation due to damage or engine failure. These stragglers are the most popular targets for the Germans and repeatedly the interceptor has heard the order "Do not attack unless you see a wallflower". This way our formations will often return and report "No fighters". The Germans, however, had us trailed all the while, and only the fact of close formation flying or adequate fighter protection made them decide not to come close enough to pick a fight. At several occasions the stoolpigeon reported to the ground station that an attack was not warranted on account of the "multitude of Indians" which means plenty of escorts.

Then again the Germans try to impress us with the few fighters they have left. At one time we had a running air battle and the interceptor heard the fighters calling the stoolpigeon telling him that they had to land because they ran out of ammunition. However, the stoolpigeon did not let them go home but ordered them to fly along our formation outside of our gun range and thus make our gunners nervous and keep them guessing as to when an attack would come. The longer we are conducting this type of gaining information the more we will learn about their tactics.

8. Intelligence Material

The airborne interceptor's most valuable help is a map of his target with a German grid superimposed. The German map grid system consists of a series of letters which indicate an area in size of 30 minutes between longitudinal lines and 15 minutes between latitudinal lines. The letters from "A" to "U" are used, omitting the letter "J". The letters run vertically from top to bottom of the map every 15 minutes, and horizontally from left to right every 30 minutes. Every one of those squares which has a full set of those letters is called a "big square", sub-divided into 400 small squares. A big square runs from any longitude ending with a zero, (10, 20, 30, etc.) to another longitude ending with a zero. The latitude limit is from one latitudinal degree ending with a four, (24, 34, etc.) to a degree ending with a nine, (29, 39, etc.). Then the next square from a degree with the last digit nine to the degree with the last digit four. There are twenty sub-divisions and twenty letters (from A to U omitting J), and each sub-division has a letter as explained above. Each such square is sub-divided again into nine equal squares which are numbered from left (up) to right (down), one to nine. This way pin-pointing can be done with a system.

Other valuable interceptor aids are listed:

The German Phonetic Alphabet is being used in identifying grid squares on maps. Several letters have two phonetic versions and both can be heard. The letters are also used to indicate the position of a plane within the Staffel. (Butterfly Caesar would be Butterfly 3)

A - Anton	N - Nordpol
B - Bertha	O - Otto
C - Caesar	P - Paul, Paula
D - Dora	Q - Quelle
E - Emil	R - Richard, Rudolf
F - Friedrich	S - Siegfried
G - Gustav, Gertrud	T - Theodor, Theo
H - Heinrich	U - Ullrich
I - Ida	V - Victor
J - Jutta, Jot	W - Wilhelm
K - Kurfuerst	X - Xantippe, IX
L - Ludwig	Y - Ypsilon
M - Martha, Martin	Z - Zoll, Zett

The German Phonetic Numbers are slightly different pronounced than when used in conversation in order to distinguish between numbers which sound very much alike. Here is the phonetic list from one to ten:

einz	seks
zwei	sieben
drei	acht
vier	neuen
fuenf	null

Conversion tables are of good use because the enemy uses a different measure system, the metric system. Scales which make quick comparison possible are needed in the following measures:

Kilometers to miles	- 1 Kilometer (km) equals 0.62 miles.
Meters to feet	- 1 Meter (m) equals 3.28 ft.
Liters to quarts	- 1 Liter (ltr) equals 1.2 quarts.

Conversion tables should be handy up to 300 km every 10 km and up to 8000 meters every 100 meters.

The German Fighter Organization is divided into units of forty five planes which is called "Geschwader". Each Geschwader is subdivided into three units, called "Gruppe" and every Gruppe again has three units, called "Staffel". Each Staffel has five planes which are either numbered - as in most cases - or lettered from 1 to 5, or A to E respectively. It seems that every Geschwader has its own stoolpigeon which either just carries the name of the Geschwader or adds to this name the call letter A. Every Geschwader has a name which will be discussed in the next paragraph. If we pick up a call name with a number we can expect that only this particular plane of the Staffel has been called upon.

Names of German Fighter Organizations vary as much as the names of our own allied fighter groups. Names include flowers, animals, cities, colors, historical persons and to a very large extent figures from the Nibelungen Saga and other Wagnerian operas. The names seem to change every once and a while and the operator has to keep a list which needs constant revision. Here are names of organizations which have been intercepted in the Southern European Theatre:

Rosenkavalier	Flamingo
Waldteufel	Koeve
Schmetterling	Febhuhn
Kiesel	Adler
Skorpion	Pelikan
Gertrude	Schwalbe
Kibitz	Kuckuck
Waldemar	Leonhardt
Reisse	Ulrich
Gelbe	Brentano
Ritter	Heinhardt
Uttar	Feigenblatt
Koenig	Giselar
Brabant	Ohlmuetz
Voelkerwacht	Inno
Holzauge	Otto
Fafnir	Brunhilde
Woelsung	Reingold
Altvater	Walkuere
Leander	Kurassier
Richwald	Tanne

German Groundstations can be easily identified because they can be received long before any inter fighter traffic can be picked up. Then they are mostly staffed by women, they come in loud and clearly and they have a permanent frequency. Their range is roughly 100 miles radius. The following German groundstations have been identified and their approximate location is given:

Location	Call sign	Frequency (Subj. to change)
Southern France	Brentano	39.55 mcs.
Northern Italy	Leander	41.25 mcs.
Austria, Yugoslavia	Losenkavalier	40.85 mcs.
Eastern Balkans	Barbarossa	39.50 mcs.
Eastern Germany	Kuerrassier	41.50 mcs.

Geographical names are different in the German language than in English. Therefore the interceptor has to know those locations which are pronounced differently in order to understand what the enemy is talking about. Here is a list of the more important places in Southern Europe:

Italy	- Italien	Yugoslavia	- Jugoslawien
Naples	- Neapel	Hungary	- Ungarn
Venice	- Venedig	Greece	- Griechenland
Milan	- Mailand	Austria	- Oesterreich
Bolzano	- Bozen	Germany	- Deutschland
Trento	- Trent	Bulgaria	- Bulgarien
Genova	- Genua	Rumania	- Rumänien
Nice	- Nizza	Russia	- Russland
Mantova	- Mantua	Poland	- Polen
Florence	- Florenz	Prussia	- Preussen
Torino	- Turin	Black Sea	- Schwarzes Meer
Corinzia	- Goerz	Danube	- Donau
Ljubljana	- Laibach	Split	- Spalato
Zagreb	- Agram	Dubrovnic	- Ragusa
Krizeci	- Krez	Pecs	- Puenkirchen
Szombatheli	- Steinamanger	Skeskesfehervar	- Stuhlweissenburg
Vienna	- Wien	Munich	- Muenchen
Praha	- Prag	Athens	- Athen
Switzerland	- Schweiz	France	- Frankreich
	Lake Constance	- Bodensee	
	Lake Balaton	- Plattensee.	

TOP SECRET

The German airborne lingo is not a code, as it has been discussed previously, but a veiled language or double talk. It can be compared partly with our own airborne lingo like "hit the silk" means to bail out or "cut the engine" means turning the switches off. These phrases should be familiar with the operator in order to grasp the true meaning right away and he should study his list of expressions carefully. There are new expressions every day and old ones are being dropped and the interceptor has to use his wits to put the proper meaning into this double talk. For instance, for a long time it was thought that the enemy was referring to Flying Fortresses when he spoke of "Dicke Autos" meaning big cars. But now he is using this phrase for every four motored bomber. At other times we picked up messages in which the Germans referred to the "Y's". At first it was believed they were referring to RADAR messages. But it could very well have been a reference to the Fortresses of the Fifth Flng which have on their tail a large "Y" painted as recognition symbol. Here is a list of German phrases and their interpretation:

Caruso	- Heading	Indianer	- Allied escort
Hanny	- Altitude	Reise Reise	- fly to home base
Quelle	- Position	Dicke Autos	- four eng. Bomber
Eigenheim	- Homebase	Zweibeinig	- twin engine plane
Bahnhof	- Airfield	Koebelwagen	- Liberator
Lote Lampe	- Out of gas	Feindwelle	- Allied formation
Habe durst	- Out of gas	Fote Felle	- Allied formation
Ligenbahnhof	- Homebase	Lote	- Americans
Weisse Streifen	- Vaportrail	Feindsicht	- Sight the enemy
Rauchdecke	- Smokescreen	Erdsicht	- Sight the ground
Siegfried Siegfried	- to land	Feindberührung	- enemy contact
Lucie Anton	- to land	Abschuss	- shoot a plane down
Fadfahrer	- planes	Drahtverhau	- protective cover
Limusine	- large planes	Stacheldraht	- protective cover
Kleine Bruder	- small planes	Pilz	- parachute
Antreten	- assemble	Fallschirm	- parachute
Rauchfahne	- smoking plane	Mauerblume	- Straggler
Gardine	- clouds	Funkstille	- Radio silence
Laum	- Area, grid square	Gartenzaun	- Air base
Aufschliessen	- make contact	Aussteigen	- to bail out
Karussell	- fly a circle	Ricardo	- repeat
Anfrage	- Questions:	Victor	- Roger
Bitte kommen	- over	Befehl	- Order
Honolulu	- to land	Jaeger	- Pursuit plane
Brautjungfer	- trail a plane	Havana	- to land
Zusatztank	- Aux. gas tank	Flak Gebiet	- Flak area
Twins	- P - 38	Staerke	- strength

9. Procedure

The actual procedure of obtaining the information is as follows:

Before take-off, the interceptor gets together with the navigator of his ship and makes sure that an exact flight log is being kept by the navigator. This is necessary because the German fighters will give, at frequent intervals by using their own grid system, the position of the attacking force or their own position or their points of assembly and points of attack. At every such instance the interceptor needs a position report from the navigator in order to determine whether the Germans deal with his formation or not. On the way to the target the interceptor will first try to pick up our own escort as it has been described before, and then tune in on the frequencies on which he can expect enemy traffic. He then will take down in writing, all messages received until the traffic stops. This will usually cover a period between three and six hours.

In taking down German traffic, the interceptor has to confine himself to the busiest frequency, even if there are several frequencies busy at the same time. With the help of a recorder, much valuable information could be secured at this time. The traffic itself comes over very weak at first, but grows in strength as we approach the target. The ground station comes in loud and clearly, and usually the operator of the ground station speaks a very distinct German. The operators are mostly women. The fighter traffic is at times very hard to understand, but it seems that even the Germans have the same difficulty because repetitions of messages are often necessary. Very often over-lapping traffic blots out much of the information but then it becomes even too much for the ground station and the operator would warn the fighters not to overlap their traffic. A great deal of cursing is being done over the air. Very often the German fighter shows himself in a very cowardly light, and the stoolpigeon or the ground station have to do much coaxing before he is willing to make a pass at the Allies.

After the flight the interceptor will enter the position reports of the flight log to his translated log, and this way we have an exact picture of what happened where and when.

10. Security

A large amount of security has to be exercised concerning the work of the interceptor. The interceptor flies along on missions as the eleventh man on a crew. Recently the Germans have been very curious as to the functions of the eleventh man, since they captured several crews consisting of eleven men. However, there are many other types of planes which use eleven men, (photographer, radar operator.) Strict rules have been made to prohibit

the airborne interceptor to take any other material along on the flights than only that which he needs in the air. The map of the German grid system is always folded in such a way that it can be torn up in case of an emergency. The conversion tables are written on the back of the maps so they can be destroyed at the same time. The log itself, as received during the flight, is written in such a way that it can also be destroyed on the shortest notice. Except for the information which directly concerns the execution of the mission, no other parts of the log are being divulged to any other person but members of the Intelligence staff. All material concerning airborne interception is being kept in a safe and marked "secret".

11. Conclusions and Recommendations

1. The intercepted information should be made available to all bombers of the flight for immediate operational use. At present all information is recorded only.

2. Jamming of the enemy traffic is not recommended by the interceptor. We believe that the information which we gain during the flight will by far outlast any profit which we could gain by jamming the frequency. Instead of destroying the German plan of attack we should counteract intelligently and forewarn our own fighters and bombers and meet their attack successfully.

3. Only occasional jamming could be recommended in a case where the German fighter is about to make a direct attack. This, however, affords a very swift decision which can hardly be made in every case because of the frequent poor reception and consequently certain doubts on the part of the operator as to the correctness of the message.

4. "Backtalking" also will not have the necessary success. The interceptor had a chance to read up on such attempts in the ETO which resulted in changing of the German procedures. If the Germans should ever catch on to our doings and would change, for instance, their map grid, we would be completely at loss.

5. Recording machines can be of great help in order to relieve the operator during the flight. The operator would have to listen in and cut himself into the recorder after every message, calling in the time. In a case of an impending attack he could get in touch with the crew of the ship without losing any traffic. As it stands now, the operator will lose valuable information every time he has to get in touch with the navigator or with the pilot.

6. Airborne interception cannot be carried out orderly unless an organization is being formed which will handle the personnel question,

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6. Airborne interception cannot be carried out orderly unless an organization is being formed which will handle the personnel question,

procurement, training, planning, maintenance, analyzing and evaluation of all matters concerning the Interception program. A table of organization should be set up for the personnel involved in airborne interception. In the past we had difficulty procuring personnel because the enlisted men could not attain any type of rating due to lack of T/O. The organization should determine how many operators should go along on every mission, should have expert maintenance men visit the different Bomb Groups regularly, should arrange proper exchange of newly gained material, such as code names and frequencies and many others. A staff should be trained to get the full benefit of information from these reports. The original version is often much more revealing than a translation. Therefore the staff should be able to read the original version.

7. Only experienced pilots should fly the interceptor ship because of the necessity to transmit, occasionally, messages from the interceptor. Only a pilot with some combat experience is able to determine whether or not the information is valuable enough to warrant transmittal.

12. Future Possibilities

The question arose whether this type of interception is readily adaptable in the Pacific theatre. This interceptor believes that it can be carried out in the Japanese theatre if certain changes are adoptable. In the first place we would have to use recording machines exclusively. We have not enough Japanese speaking men to operate the system similar to the European system. However, we could use an operator who is inexperienced in the Japanese language and have him mainly manipulate the recorder and assure its proper working during the flight. Later on the ground we can use one Japanese speaking operator to make the translations. The air operator would have to listen in and start the recorder when he hears the first traffic. He would have to number the different messages by cutting himself into the recorder and counting off: 1, 2, 3, and so on, at the same time keeping a log of the time when he called the different numbers. He further has to keep a log of which messages he received over what frequency. After the translator has worked those records over, it can be determined which frequencies yield valuable material and the next time the airborne operator will know which frequencies to turn in to. Of course there can be no actual forewarning in the air, but we still will retain the strategic value of the chatter among enemy fighters. It has still to be seen whether the Japanese fighters use the same tactics as the German fighters. This chapter needs further study before any conclusions can be made.

4-37N
6-53E

0943 179 23300
Abtanz, Feindverbaende im Raume Dortmund, Harry 6700 Course IRO Anfrage Feigenblatt haben Sie Feindsicht, bitte kommen, Frage Victor

Attention; Enemy Formations in Grid square D/P, altitude 6700 meters (21900 ft) heading 180°. Question: Do you see the enemy? Ask confirmation, over, Feigenblatt (Name of Fighter group)

0942

Feigenblatt von Barbarossa: Bombenwurfer ueber Otto Paula. Alle Feigenblatt sofort nach Otto Paula kommen. Die dicken Autos fahren zur Donau, haben viele kleine Krueger an der Spitze, aufpassen auf die Zwillinge.

Feigenblatt from Barbarossa (Fightergroup from Groundstation) Bombs are being dropped over Grid square D/P. All Feigenblatt fighters shall come flight away to O/P. The big autos (heavy bombers) are heading for the Danube. They have many small brothers (escort) on their head. Watch for the twins. (P-38's.)

3-55N
5-28E

0955 215 19500

Barbarossa von Feigenblatt: Dicke weissen Barbarossa from Feigenblatt: Big waves (large formation) above us with few Indians (allied fighters) We are going to make contact, ask for confirmation

Attack Feigenblatt, Roger, roger.

0956

Angreifen Feigenblatt, Victor Victor.

0958

Feigenblatt 4, 5, 7 und 8 von Feigenblatt Angriff. Von vorne angreifen los, angreifen -- Warum gehen Sie dann runter, Sie Feigling, los, greif an -- nochmal -- Wenn Sie sich nicht beeilen werden wir Indianer haben -- Geh doch raueher ran, Mensch, woher hast Du Deine Gewehr -- Ja, das war besser -- Achtung, da sind Mustangs, schnell abfallen -- machen Sie Lucie Anton im Indisch Urtich 7 -- Gehen Sie nicht heim, Feid is burning. Der Samball brennt.

Feigenblatt 4, 5, 7 and 8 from Feigenblatt (Anton) Attack from the front -- Go ahead, attack -- Why are you going down you coward, go ahead and attack -- once more -- If you don't hurry we will have Indians (allied fighters) -- get in a little closer, man, that's what you have your guns for. -- Yes that wa better -- Watch out there are the Mustangs, let down quickly -- Make Lucie Anton (land) in Gridsquare L/U-7. Don't go home (home base) your pig shed (attraction) is burning.

1000

) The number behind the fighters group name indicates the position within a "Staffel". The word "Anton" usually indicates the Stoolpigeon, indicating the letter "A". In this case we have a running comment by the stoolpigeon directing the attack.

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