

SECRET

A. D. I. (K) Report No. 406-45/1944

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G.A.F. SIGNALS INTELLIGENCE IN THE WAR - V

Advance Warning, Route Tracking and Forecasting of offensives.

1. In December 1939 a force of R.A.F. Wellingtons attempted a daylight attack on Wilhelmshaven. In the approach flight its radio traffic was picked up by German intercept units who, in contravention of their orders, immediately passed the results (location, height, course, etc.) direct to the higher authority concerned. As a result German fighters were directed to a favourable point for interception and, as is known, obtained some good results.
2. After this success, the development of tactical evaluation (Sofortauswertungen) with direct landline links to the operational units was strongly advocated by the more enterprising young officers. There was strong opposition by superior officers on security grounds, but the progressives won.
3. The outcome was that Meldeköpfe (reporting centres) were set up and were to be responsible for the collation and evaluation of intercepted and D/F signals and their distribution in standard form to the interested authorities.
4. Meldekopf BIRK, set up on the Channel coast, was to supervise fighter operations, and Bomber-Meldekopf at Zeist in Holland for the special support of German night fighters. As the Allied Air Forces in the West became stronger, the activity of the Meldeköpfe became more important for both advance warning and route tracking. The advance warnings supplied by the Meldeköpfe were usually short-term, i.e. of hours or even minutes.

5. Long-term forecasts of major Allied operations were provided by strategic evaluation (operative Auswertung). As the war progressed the evaluators gradually acquired so thorough a knowledge of Allied traffics, that they could often calculate enemy intentions from the minutest indications.

6. The P/W who supplied the information contained in this report emphasises the fact that he did not work on either R.A.F. or VIII U.S. Bomber Command heavy bomber traffics, and therefore his knowledge is necessarily incomplete. The following were the sources of advanced warnings and route-tracking data.

#### ADVANCE WARNING AND ROUTE TRACKING.

##### R.A.F. BOMBER COMMAND (APRIL) 1942 TO MARCH 1945).

7. As long as P/W was with Referat B at Asnières there were always some means available for obtaining advance warning. As one source dried up, another was found. The following were the main sources from which the Signals Intelligence service drew their conclusions:

- (1) The traffic of every R.A.F. Bomber airfield was covered day and night. At certain fields definite indications of impending operations such as tuning-traffic or radio silence were observed.
- (2) The covering of R/T traffic on airfield frequencies (over 5,000 kc/s) or on 6,440 kc/s disclosed such things as postponement of operations or very active take-off traffic.
- (3) From meteorological messages one could tell whether a particular airfield was fit for operations or not.
- (4) D/F Section tuning traffic.
- (5) Tuning traffic of Air-Sea Rescue boats before R.A.F. bombing ops. This was a certain indication for a long time, but was eventually dropped.
- (6) Interception and D/F'ing of I.F.F. This method was employed for a fair time with the R.A.F. and much longer with the U.S.A.A.F.
- (7) H2S and H2X interception.
- (8) Interception and D/F'ing of traffic from single aircraft, signalling that they would have to discontinue operations owing to engine trouble. S.O.S. calls, etc.

- (9) W/T orders from Group H.Q. to some or all of the units in the Group to break off operations. These orders were passed in the Bomber Code, most of which was broken.
- (10) Appearance of 100 Group's long-distance escort night fighters. Interception and D/F'ing of A.I. P/W stated that as the escorting fighters remained close to the bomber stream, the D/F'ing of the A.I. gave the position of the bomber stream.
- (11) Transmissions of the A.E.A.F. aircraft reporting centre in the vicinity of London, callsign Q28, known to the Germans as Freischuetz-Meldungen. This centre worked on several frequencies, both HF and LF, and transmitted blind for the benefit of all interested units, such as A.A. and night fighters, to warn them of impending operations by single aircraft or formations. These messages were passed in a 3-letter code, which had been worked on for a considerable time, but was never broken. It was, however, inferred that the longer the message was, the greater would be the size of the raiding force and the longer the route. The longest messages were passed before major R.A.F. and Eighth Air Force raids. In the Paris area there was a similar radio station which repeated the messages when the track lay over French territory. Whenever station Q58 passed a long message in the late afternoon which was re-transmitted by the Paris repeater,

(a) There would be a major R.A.F. attack that night.

(b) The R.A.F. formation would fly over France.

If an operation had to be cancelled on account of deteriorating meteorological conditions, a message was transmitted saying "Cancel my message No....." which was passed at once by the German Signals Intelligence service to the competent quarters.

- (12) Transmissions of an American aircraft reporting centre in France (presumed to belong to the IXth Air Defence Command: German cover-name:- Wildkatzen messages). The structure of these messages had been broken since the African campaign, e.g.

T67 PS M8013 W1 H A8

Explanations:- T67 - Target number 67.  
PS - Re-cyphered track.

M8013 - Location. Re-cyphered  
 modified system (broken).  
 W1 - No. of aircraft.  
 H - Hostile (F = friendly,  
 X = unidentified).  
 A8 - Height in angels.

This kind of traffic appeared from the beginning of the invasion, but brought mediocre results, as movements of German aircraft were mainly reported, and very soon it dropped altogether, presumably because landlines were set up.

From about autumn 1944 an American station regularly reported Allied formations as well as German ones, thus providing a new and very reliable source of early warning. Most of the first positions lay in the Amiens - Abbeville area, the last ones roughly at the German border.

- (13) Interception and D/F'ing of 100 Group airborne jammers. The jammers were positioned over the North Sea or over Belgian or Dutch territory and sometimes flew with the bomber stream into Germany. The appearances of the jammers was no sure indication of impending operations, but it was certain that if no "mandrel" screen appeared there would be no major raid.
- (14) Interception and D/F'ing of W/T and R/T traffic during an operation. In the case of the R.A.F. this was almost non-existent, but when it did occur, as for example on 6,440 kc/s by the Master of Ceremonies and on V.H.F. by the Master-bombers of 5, 8 and 100 Groups, it was eagerly seized upon.
- (15) Interception of J-Beams (called Rodelbahn by the Germans). The determination of the beam direction was made difficult by the concentration of the beams. Naturally it was most favourable when the beams happened to pass over an observation station. With increasing distance the beam breadth increased to such an extent that only the approximate area of attack could be established, to for example, North Germany or South Germany. An attempt was made towards the end of the war to-determine the exact bearing of the beams by means of special observation aircraft. Results were negligible.

8. The results of observations from all outstations were collated at the Meldeköpfe and if an operation was indicated, the control officer (Leitoffizier) released the cover-word "Adler"; if no operation was indicated "Taube".

## COMMENTS ON R.A.F. BOMBER GROUPS.

### 5 Group.

9. 5 Group was known to hold a special position in Bomber Command; it had small specialist formations which carried out daylight attacks on special targets such as dams, port installations and ships (Tirpitz), etc. At night it operated mostly separately from the other bomber groups. By extraordinarily good discipline in the use of radio and navigational equipment, it caused the G.A.F. signals intelligence the maximum amount of worry, as in the case of one attack on Munich which took place at 0500 hours. On that occasion the first radar intercepts were made when the formations were almost over Munich and as the ordinary aircraft reporting service had failed, Munich was taken completely by surprise, without even an air raid warning being given.

### 3 Group.

10. The daylight attacks, carried out chiefly by No. 3 Group provided very little early warning. Often the Lancasters were over the German frontier before the warning was given. In many cases the R/T traffic of Fighter Command escorts gave the first indication of daylight attacks.

11. The special agent-supplying operations of the Tompsford Squadron (138 and 161) were never intercepted before or during an operation, but at best on the return flight. Many attempts were made to forecast the dropping area or subsequently to locate them by calculation, but neither the listening service nor the radar observation service produced any useful results.

### 8 Group.

12. The radio discipline of this Group was also above the average. Often it could only be gathered that 8 Group aircraft were taking part in a raid from the Group H.Q.'s meteorological transmissions.

13. On the other hand, the Mosquitoes which regularly attacked Berlin towards the end of the war were always picket up in the area of the Frisians by means of H2S interception and D/F.

## 8th AIR FORCE EARLY WARNING AND ROUTE TRACKING

14. The raid forecasts of R.A.F. Bomber Command produced by the Signals Intelligence service were fairly reliable, but sometimes complete surprises and wrong decisions did occur. On

the other hand, P/W stated that it could safely be said that no 8th Air Force raid ever came as a surprise. Advance warning of some hours was generally given, and the sources were as follows:-

- (1) Preparations for a raid indicated by airfield W/T and R/T activity.
- (2) Switching-on of Splasher beacons to assist assembly. These beacons were frequently switched on when no raid was projected, but on the other hand no raid took place without the assistance of the beacons. From the locations of the beacons switched on rough estimates could be made of the direction of the attacks. If the beacons in S.W. England were transmitting, the attack could be expected in the direction of France and Belgium; if those in N.E. England were working, then the target would lie in the Heligoland Bight - Norway direction.
- (3) Meteorological reconnaissance in the assembly area. To determine the best height for assembly, meteorological reconnaissance aircraft took off before a projected raid. The appearance of these aircraft showed the intention to carry out a raid.
- (4) Radio traffic during assembly. If the meteorological reconnaissance reported favourable conditions, the bombers started to assemble. The assembly took place over the Wash and was so difficult that air-to-air R/T traffic became essential. Upon observation of this traffic, which could be intercepted even in Germany itself, the cover word "Zugvoegel" was released (i.e. U.S.A.A.F. major operation expected). Even during assembly the exact composition of the force (Divisions, Combat Wings, etc.) and their position in the formation could be ascertained from the frequencies employed.
- (5) Take-off of fighter escort. The assembly took place without fighter protection and the fighters took off when the assembly was completed. Thus the first appearance of fighter R/T indicated that the assembly was complete and the force had already started out.
- (6) Control Point Messages. When the formations passed certain control points the formation leaders had to send a W/T message encoded in Bomber Code to their H.Qs. According to the length of the formation, and as all the messages could not be received simultaneously by the ground station, it was possible by D/F'ing this W/T traffic to make a rough estimate of the track.

- (7) Open transmitters. It often happened that V.H.F. R/T sets TR.5043 or H2X were left switched on. A D/F on the carrier frequency obtained a good track.
- (8) Air-to-Air R/T traffic (Bomber-fighter, fighter-fighter). This very active R/T traffic was, of course, thoroughly monitored. A study of their contents yielded the following results:-
  - (a) Heights and speeds.
  - (b) Locations (We are over Cologne).
  - (c) Indications of effectiveness of G.A.F. Fighter and Flak defences.
  - (d) Deviations from the original plan.
  - (e) Preparations and order to release bombs.
- (9) W/T traffic during an attack. Messages from aircraft to ground station and vice-versa were usually sent in the Bomber code, which was regularly broken. They contained the following information:-
  - (a) H.Q. orders to break off operations.
  - (b) Alterations in the original plan (e.g. changing of the rendezvous point of bombers and fighters).
  - (c) Bombing results, stating whether primary or secondary targets attacked; whether visual or radar bombing used and with what effect.
  - (d) Damage reports from single aircraft.
- (10) D/F of navigational transmissions. H2X and GH were the most useful in this respect.
- (11) Up to the time when the escorting fighters became capable of accompanying the bomber stream over the entire route, each relieving formation of fighters had to fly directly to the rendezvous point with the bombers, thus indicating the direction of the target area. This was much more reliable than a D/F on the bomber formation, which regularly flew on "spoof" routes.

**MEDIUM BOMBER FORMATIONS.**

### 2nd Bomber Group, 2nd T.A.F.

15. There were no possibilities for obtaining early warning from 2nd Bomber Group as their radio discipline was very good. Observation produced only insignificant results.

### IX Bomber Command (or 9th Bombardment Division).

16. Approaching formations were often followed by D/F'ing the V.H.F. W/T traffic. As their W/T security was good, however, not much success was obtained.

17. When, in December 1944, the medium bomber formations of IX Bomber Command went over to bad-weather attacks under Oboe control new sources of early warning came into existence. The Oboe control stations were by then in the Belgium - France area, and the monitoring of these W/T stations both before and during operations provided the means of forecasting an attack as much as 45 minutes ahead, and the actual targets 8 - 25 minutes ahead. The ground-to-air V.H.F. control traffic produced no such result.

18. The control station of the various radio networks lay in the U.K. and had the callsign X25. The evaluation was done without cryptographic breaking. With the exception of IX Bomber Command attacks, the same method applied to the Oboe-controlled attacks of 8th Group in so far as the control of the W/T stations was carried out on the Continent and not in the U.K.

### 42 Bomber Wing/Brigade Tyrol (1st U.S.T.A.F.)

19. Early warnings of the approach of 42 Wing forces were deduced on the basis of D/F's on the R/T traffic of approaching bomber formations. The R/T security was not as good as that of the tactical bomber forces in N.W. Europe, and route-tracking was therefore relatively easy.

## FORECASTING OF OFFENSIVES

### THE INVASION.

#### Formation of the A.E.A.F.

20. Since its setting up in May 1943, 2nd T.A.F. used different callsigns from those of the rest of the R.A.F.; these consisted of a letter followed by figures. When the A.E.A.F. was set up in January 1944 the 9th Air Force adopted the 2nd T.A.F.'s callsign system. This showed that unity of command of the short range bomber forces had been achieved, which new authority was referred to in press reports as the



A.E.A.F. From that moment A.E.A.F. stations were easily distinguished from all others.

### The Conclusion of Training.

21. In March 1944 a huge Allied exercise (cover-name Spartan), in which Army and Air Forces took part, was held in S.E. England. After this, apart from a few minor radio exercises, there was no more of this kind of activity. The obvious conclusion was that the period of training was at an end and preparation for the real thing was under way.

### Change of Location of T.A.F. Formations.

22. The radio networks of 2nd T.A.F. had been virtually solved by signals intelligence since 1943. In the spring of 1944 all the radio stations of 83 and 84 fighter groups had been regularly D/F'd, as it was considered that the movement of these units would provide indications of the coming invasion. All chances of location were evaluated immediately: in April and May 1944 almost all the radio stations of 83 and 84 fighter groups moved into the Portsmouth area (Tangmere) and those of the 2nd bomber group to the Reading - Odiham area. The focal point of the fighter formations lay clearly around Portsmouth.

23. The intelligence thus obtained from the monitoring of W/T ground stations, was fully confirmed by V.H.F. R/T traffic. When the Headquarters of 83 and 84 Groups moved to the South coast in May 1944, the indication of the end of the Allied preparations and the direction of the planned attack was unmistakable.

### IX and XIX Tactical Air Commands.

24. Up to the spring of 1944 the monitoring of the 9th U.S. Air Force had produced the following results:-

- (a) The fighter formations of the 9th Air Force were subordinated to the IX Fighter Command and were attached to the 8th Air Force. They were stationed in the Wash area and escorted 8th Air Force heavy bombers in the same way as the VIII Fighter Command.

According to all available intelligence there was only one fighter Wing of the 9th Air Force ready for operations. Some detailed prisoners at Dulag Luft had stated that it was called 70 Wing, but others had said it was 100 Wing. As the 9th Air Force was to support an Army Group

in the invasion, the fighter units temporarily operating with 8th Air Force would have to be re-subordinated to the 9th Air Three. Thus signals intelligence concluded that as long as the 9th Air Force fighters continued to operate with the 8th Air Force there would be no invasion.

(b) There were two Air Support Commands (IX and XIX) each one of which was to support an army. The IX A.S.C. was probably taken over from the 8th Air Force, and the XIX newly formed. Both formations were known from many plain language messages transmitted during exercises. These Air Support Commands were later re-named "Tactical Air Commands". At first 2nd T.A.F. only had Air Support Parties and a Tactical Reconnaissance Group each (IX TAC had 67 Tactical Reconnaissance Group and XIX TAC had 10 Tactical Reconnaissance Group) at their disposal.

25. In order to carry out their function of supporting an army each, the Tactical Air Commands would have to be brought up to operational strength sooner or later. In the middle of May 1944 the expected development took place, being indicated as follows:-

- (i) In the 9th Air Force ground networks great changes occurred, which could not be completely elucidated as there was a re-allocation of callsigns. This, however, constituted an initial warning.
- (ii) The fighter formations of 70 (100 ?) Wing ceased to be subordinated to 8th Air Force, were moved to the Maidstone area and started using 9th Air Force frequencies.
- (iii) Suddenly some new U.S. fighter formations appeared simultaneously on a large number of frequencies, which could be divided into two major groups. Firstly, a large formation of about eleven Groups lay in the area of Middle Wallop and South of it, and secondly, a smaller formation of about nine Groups, amongst which was 70 (100 ?) Wing was located in S.E. England (Maidstone). It was thus clear that the expected bringing up to strength had taken place, but it could not

yet be determined which was the IX and which the XIX Tactical Air Command.

**Preparations by IX Troop Carrier Command.**

26. The following facts were already known:-

- (a) In the control network of the 9th Air force a new station, D/F'd in the Grantham - Cottesmore area appeared. This station was simultaneously identified as the control station of three subsidiary networks, D/f'd in the Exeter, Aldermaston and Grantham - Cottesmore areas.
- (b) Monitoring of air-to-air W/T traffic produced numerous new U.S. aircraft callsigns. It was at first believed that a new bombardment Division of 8th Air Force was being set up, but it was soon clear that it concerned twin-engined aircraft which were used chiefly for transport purposes. Many shuttle flights were observed in the Grantham - Cottesmore area. From a statistical consideration of these flights and study of the callsigns, the strength of this formation was estimated at about 1,000 aircraft.
- (c) The above aircraft used the Bomber Code. Many of the messages were broken and showed that the aircraft were almost exclusively C.47 (Dakotas). In another Bomber Code message 50 Wing was mentioned. 51 Wing had been known in Italy as a transport Wing, and so it could be safely assumed that transport aircraft were in question.
- (d) From the Monitoring of H.F. R/T traffic of Fulbeck airfield (near Cottesmore) on about 5,100 kc/s, it was ascertained from messages like the following that great training activity with C.47's and freight gliders was in progress:-

"Have you the glider in tow?"

"There is a 9-ship formation of  
C.47's with gliders in tow.

"Can you see the match-box?"

Gradually it became obvious that a fairly large force of C.47's, suitable for towing

gliders and transporting parachute troops, was subordinated to the 9th Air Force. There were indications that the formation was IX Transport Command, but its correct designation appeared soon afterwards to be IX Troop Carrier Command. Thus, large-scale use of airborne forces could be expected at the beginning of the invasion.

#### **Preparations by R.A.F. 38 Transport Group.**

27. The ground network of 38 Wing (later Group) when it was subordinated to Army Co-operation Command had been analysed since 1942. Occasionally ground-air traffic messages in Bomber Code were de-coded, showing that 38 Group too was being prepared for airborne operations. On the whole, however, the depth of traffic was less than that of IX Troop Carrier Command. Traffic links between 2nd T.A.F. and Netheravon (H.Q. of 38 Group) indicated close liaison between both formations.

#### **Control Stations on Warships.**

28. At the end of May 1944 it was established that American flying control stations on board warships were once more providing the units ashore (e.g. A.S.P.'s) with the means of communication. D/F's indicated Plymouth and Portsmouth. Thus it was clear that embarkation for the invasion had begun.

29. At the end of May the G.A.F. Signals Intelligence service issued a pre-invasion warning, approximately in the following form:—

"All the preparations of the British and American Air Forces are completed. Two American and two British short-range bombing forces are ready on the south coast of England to support four armies. The embarkation of staffs has begun. A major landing is to be expected any day now."

30. The landing itself was picked up as follows on the night of 6th June 1944.

- (1) Shortly before midnight very strong jamming activity, attributed to R.A.F. 100 Group was directed against German ground radar. The jamming screen moved slowly from East to West, so that it was at once assumed that its purpose was to screen a fairly large formation of Allied vessels.
- (2) The weather reconnaissance and the assembly of American bomber formations of VIII and IX Bomber Commands began long before the normal time. This striking advancement of

take-off times similarly showed that something special was afoot.

- (3) The approach of the landing fleet was achieved with complete radio silence. The traffic which was transmitted immediately on landing was intercepted and evaluated according to the pre-arranged formulas.

#### **FORECASTING OF ALLIED OFFENSIVES.**

##### **General.**

31. After the invasion it was rapidly established that certain air formations always supported certain army formations, thus:-

83 Fighter Group	-	2nd British Army.
84 Fighter Group	-	1st Canadian Army.
IX T.A.C.	-	1st U.S. Army.
XIX T.A.C.	-	3rd U.S. Army.
XXIX T.A.C.	-	9th U.S. Army.
XII T.A.C.	-	7th U.S. Army.

32. From movements, increases in strength and other changes of the air force formations, conclusions could be drawn concerning the related army formations. The monitoring of tentacle and A.S.P. traffic produced intelligence on the Army Order of Battle. This task was facilitated by the A.E.A.F.'s use of fixed callsigns. From May 1944 till the end of the war, there was no change of callsigns.

##### **First Operation of the 9th U.S. Army in November 1944.**

33. The impending employment of a new Tactical Air Command and consequently of a new U.S. army became known in the following manner:-

- (i) In the control network of the 9th Air Force a new station appeared which was also the control station of a subsidiary network. In this new network only callsigns of fighter groups, which were formerly subordinated to IX or XIX T.A.C., appeared. Thus, it was concluded, a new Tactical Air Command must have been created.

- (ii) In a broken M209 message, XXIX T.A.C. was mentioned.
- (iii) Monitoring of V.H.F. R/T showed the same development. The appearance of a new callsign (Rosario) and of the fighter groups formerly subordinated to IX and XIX Tactical Air commands. D/F's on the headquarters of IX and XXIX T.A.C. and on the subordinated Groups indicated a powerful concentration of Allied forces West and North-West of Aachen.

34. At the same time certain A.S.P.'s were dropped from the 3rd and 7th Army sectors and appeared in the 1st or 9th Army sectors with the same callsigns. This was a clear indication of the change of location of the corresponding ground forces. On the basis of this intelligence it could be announced that two U.S. Army was ready to open a major attack in the Aachen area, and that the newly identified 9th Army would take part in it.

#### **The Final Allied Offensive in the West (February - March 1945).**

35. The German Ardennes offensive in December 1944 had produced considerable re-grouping of Allied forces. In the first stage of this German offensive certain Groups from all of the Tactical Air Commands are subordinated to IX T.A.C. At the beginning of the 3rd Army's counter-offensive the XIX T.A.C. had eight Groups allocated to it, while at the same time XXIX T.A.C. was almost completely stripped keeping only two Groups. The 8th Air Force sent two fighter groups from the U.K. to France to strengthen the 9th Air Force. After the repulsing of the German offensive, the following facts indicated preparations for a new Allied offensive:-

- (i) The XII T.A.C. was strengthened by two Groups, taken from the XXII T.A.C. in Italy, but had to give one Group to XIX T.A.C.
- (ii) IX, XIX and XXIX T.A.C.'s each had five fighter-bomber and one tactical reconnaissance group allocated to them. Thus all the American armies had air support of equal strength. It appeared from the shorter combat fronts of the 1st and 9th Armies that the focal point of the attack would clearly lie on the American northern wing, roughly in the area of Aachen.
- (iii) The formations and headquarters of 84 fighter Group moved North-East, immediately behind the front.

- (iv) All British and Canadian tentacles were subordinated to the 1st Canadian Army. From (iii) and (iv) the inference was obvious that the Canadians would make the initial thrust.
- (v) Shortly before the offensive the advanced headquarters of 9th Air Force was D/F'd at Namur to which it had moved from Luxemburg, emphasising the fact that the main centre of attack would be on the U.S. northern wing.
- (vi) The advanced headquarters of A.E.A.F. had been D/F'd in Rheims. The re-appearance of this advanced headquarters was a clear sign that an attack was imminent.

**FORECASTING OF GROUND OPERATIONS ON THE BASIS OF AIR SUPPORT RADIO TRAFFIC.**

**W/T Traffic.**

36. As explained in Part IV of this series (A.D.I.(K)405/1945) the Army-Air exercise traffic and the exercises which took place in the U.K. between Dieppe and D-Day offered great scope for calculating intentions. As a result of this study the following preparations were made to deal with invasion, when it should be launched:-

- (i) Meldekopf II was set up in the Paris area with the task of evaluating Allied air traffic, especially that of the A.E.A.F.
- (ii) All interested Army and G.A.F. stations received the special key (Senderschluessel) to enable them to read the W/T warning transmission (Warnfunk) of Meldekopf II.
- (iii) All outstations were provided with all the necessary documents to enable them to take over another station's functions, should it cease to operate.

37. Immediately after the landing on 6th June 1944 the expected forms of traffic were picked up. These were chiefly requests for air support from the British tentacles and the American Air Support Parties and took the following form:-

Tentacles: A) Guns in V2012 (description of target).  
 B) Bombers (desired type).  
 C) 1120 (time of operation).  
 D) Not S. of (special instructions).  
 river

E) Light A.A. (type of defence expected).  
F) 0920 (T.O.C.).

### A.S.P.'s.

38. The German intercept operators were instructed to call their N.C.O. in charge of the shift as soon an A.S.P. message began to come through. A typical message would read as follows:-

- A) PLK/4. (Callsign and request signal number).
- B) Enemy tanks at V 8013.
- C) ASP (As soon as possible).
- D, E, F) Similar to above.

39. As soon as A, B and C were picked up the message was passed on for further action and in this way valuable minutes were saved. In many cases it was reported that the message had been delivered in time for countermeasures to be taken. These messages were sent later in the Slidex Code, but the breakers worked rapidly enough to prevent any serious delay.

40. Warnings were also provided by the W/T networks which transmitted the results of short-range reconnaissance, and the Army 'Tactical reconnaissance broadcasts' were also useful in providing the following intelligence:-

- (i) Focal points of reconnaissance. Each message was flagged on a map. In this way conclusions as to intentions could be drawn from flag concentrations, etc.
- (ii) Railway activity, positions and movement of troops, etc. Co-operation with the railways was especially close. They received all the messages concerning them and took steps accordingly.

### R/T Traffic.

41. After the break-through at Avranches the Americans began to carry out almost their entire air support traffic by V.H.F. R/T. The control of fighters virtually passed from the H.Qs. to the A.S.P.'s which operated with the armoured spearheads and at other vital points. As a result of their air superiority the Americans could afford to keep a constant air umbrella over the points of attack, which could be called off in case of need by the A.S.P.'s and switched on to other profitable targets.

42. The warning activities of Meldekopf II were interrupted for a time on account of the above-mentioned changes of



tactics and frequent changes of location. But experimental, squads, working near the front line, soon found new means of obtaining signals intelligence, and these were put into use by September 1944 when the western front became more stable.

43. It was found that the time lapse between the briefing by A.S.P.'s and the actual attack was too short to live adequate warning to the threatened formations with the method which had been successful for the former W/T intercepts. The former routine was:-

- (i) Interception by intercept stations.
- (ii) By landline or radio to Meldekopf.
- (iii) Decoding.
- (iv) Broadcast on W/T warning transmitter.
- (v) Pick-up by divisions, etc.
- (vi) Decoding.
- (vii) Passed to threatened formation.

44. Even under the most favourable conditions there was a time-lag of 15-20 minutes, so intercept squads of three to ten men with one to three receivers were set up at Army Group, Army, Army Corps and sometimes divisional H.Q.'s, solely to deal with the immediate evaluation of A.S.P. R/T traffic. These squads only monitored the V.H.F. R/T traffic of the T.A.C. in their own sector, and proved their worth in the American sectors of the Western front. Attempts to do the same thing in the British sectors produced little result, for the British tentacles continued to use W/T. The R/T traffic of 83 and 84 Groups had for some time not given so many opportunities for advance warning as the Tactical Air Command.

45. The present P/W was officer in command of an R/T squad with Panzer AOK 5 in the winter of 1944-1945 and for a time with 11th Panzer Division, first in Alsace-Lorraine and then in the Düren sector. These are a few examples of traffic passed about this time:-

Callsign Key:

Ripsaw ..... H.Q. XIX T.A.C.  
Limber ..... A.S.P. with 2nd French Armoured  
Division.  
Eggcup ..... A.S.P. with 4th U.S. Armoured  
Division.  
Vibrate..... Squadron callsign.  
Rabbi ..... Squadron callsign Tactical  
Reconnaissance Squadron.

Vibrate leader calling Ripsaw .... We are airborne now. Ripsaw .... Go to Eggcup. He has a target for

you. Vibrate calling Eggcup .... Have you a target for me. Eggcup .... Yes. There is a very important C.P. at Q.3859. Repeat Q 3859.  
Vibrate .... I understand C.P. at Q 3859.

**Result.**

Immediate warning to the threatened C.P. There were eleven minutes (and often more) before the attack could be launched, as the Squadron had to locate the target first. In this time personnel and key equipment could be moved to safety.

**Example 2:**

The 2nd French Armoured Division got into difficulties as the result of a German counter attack. The A.S.P. appealed to all available air forces for help: "Limber calling trouble". The enemy's weakness as indicated by this message was fully exploited by our own Command.

**Example 3:**

The Vibrate squadron was frequently referred to Eggcup on a late afternoon sortie.

Eggcup .... There are about ten enemy tanks in the village at V 7853.  
Vibrate Leader .... We are in the target area, but we cannot see anything.  
It's too late for today.  
Eggcup .... O.K. Return to base. We shall attack these targets tomorrow morning.

**Result:**

Early warning to the panzers concerned, who changed their location and camouflage.

46. Of course not all the warnings arrived in time, but the warning squads (Horch Verbindungskommandos: H.V.K.'s) won a great reputation on the strength of their timely warnings. These were in a position to provide their army formations with an accurate current air situation picture, which was most important for the employment of reserves and transport, e.g.:

0900: In our own sector still absolute quiet. Net. recce aircraft report bad visibility.

1040: One fighter squadron taken off. Flying into the

Metz sector to attack gun sites.

- 1050: Three more fighter bomber squadrons taken off. Danger of fighter bomber attacks for the whole sector. Centre of attack probably Metz.
- 1135: Fighter Bombers break off operations owing to weather conditions.
- 1230: Further enemy air activity at present unlikely owing to weather conditions.
- 1500: Further low fog over enemy airfields. In spite of fine weather in our own sector no fighter-bomber activity expected.

47. The H.V.K.'s also monitored pure army traffic (V.H.F. R/T 20 - 40 mc/s.), e.g. artillery spotters and observers, tanks, etc. The Army was considerably behind in the matter of R/T monitoring and was often surprised at the results of the squads.

48. The A.S.P.'s used fixed callsigns from May 1944 to March 1945 and each A.S.P. was attached to a particular Division or Corps. The A.S.P. of the 30th Infantry Division, for example, kept the callsign "Ironclad", that of the 4th Armoured Division "Eggcup". The A.S.P.'s always transmitted on the frequency of the T.A.C. of their respective Armies. Thus the monitoring of A.S.P. traffic produced the following results:-

- (a) Which divisions were being employed.
- (b) Which army they were subordinated to.
- (c) The exact sectors in which they operated.

49. When, in March 1945, a system of frequently changing A.S.P. callsigns was introduced, this source of strategic intelligence was no longer available.

#### Forecasting of Airborne Landings.

50. The G.A.F. Signals intelligence service had least success in forecasting airborne operations. Neither the major landing in Normandy in June 1944, nor that in Arnhem-Eindhoven, nor yet the great supply-dropping operation for the American troops surrounded in Bastogne, were picked up. The preparations of the IX Troop Carrier Command and of R.A.F. 38 Group were known, but no tactical indication of the actual operations was given. There were two reasons for this failure:-

- (i) The excellent radio security of the transport units during these operations.
- (ii) The failure of the intercept Kompanien of the German Intelligence service.

51. After the withdrawal from France a new organisation was set up to monitor air transport traffic. This monitoring was transferred from III/Ln. Regt. West (later Ln. Funkaufkl. 357) to a newly created Kompanie of Ln. Funkhorch Abt. West (later called Ln. Funkaufkl. Regt. 351). This reorganisation was being carried out when the airborne landing over Eindhoven-Arnheim took place; thus the repulsing of the British airborne landing at Arnheim was not due to G.A.F. signals intelligence work. This new Kompanie, which employed many females, produced better results for long-term intelligence, but failed to pick up the supply-dropping operation over Bastogne. This brought the Signals intelligence service no small amount of criticism from the commands.

52. The Signals Intelligence service was able to give about an hour's advance warning of the Bocholt operation in March 1944 and to give a running commentary on the approaching formation. But even in this case the intelligence came, not from monitoring of radio traffic, but from the American aircraft reporting service (Wildkatzen messages); yet the preparation of American transport formations had again been correctly recognised. Only the place and exact time of the operation had not been established, but the concentration areas of reconnaissance flights and other indications described earlier in this report provided sufficient evidence to make a fairly reliable forecast as follows:-

- (i) By the changes of location of 52 and 53 Wings of IX T.C.C. from the U.K. to France, where 50 Wing had already been for some time. These movements were accompanied by numerous P/L messages, from which all the details of the operation could be followed.
- (ii) Radio silence or considerable limitation of traffic from the H.Q. transmitters of 52 etc. Wings, as well as other traffic indications.
- (iii) It had not been clear for some time where the 82nd and 101st (American) Airborne Divisions were located, but it was known from radio intelligence that they had been pulled out of the western front. Then a few police (presumably movement control or M.P.) messages provided the answer. The contents were roughly as follows:-

"Tomorrow from 0900 to 1100 hours the road from ..... to Mourmelon will be kept free from traffic, as the (either 82nd or 101st) Airborne Division is moving from ..... to Mourmelon with vehicles."

- (iv) Photographic reconnaissance then investigated the Mourmelon (near Reims) camp and the pictures showed about 1700 ten men tents and a proportional number of Dakotas.
- (v) In a similar way the location of the other airborne division was established.
- (vi) 38 Group had moved from the area of Metheravon to the N.W. of London, with H.Q. at Earls Colne, suggesting that this group would again be employed.

A.D.I.(K) and  
U.S. Air Force Intelligence.  
30th October 1945

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