

**Final Report  
of the Aircraft Accident  
Investigation Bureau**

**concerning the incident (Airprox)**

between AZA593 and F-GLHK

on 15 March 2003

Geneva Airport

# FINAL REPORT

## AIR TRAFFIC INCIDENT REPORT (ATIR)

### AIRPROX (NEAR-MISS)

THIS REPORT HAS BEEN PREPARED FOR THE PURPOSE OF ACCIDENT/INCIDENT PREVENTION. THE LEGAL ASSESSMENT OF ACCIDENT/INCIDENT CAUSES AND CIRCUMSTANCES IS NO CONCERN OF THE INCIDENT INVESTIGATION. (ARTICLE 24 OF THE AIR NAVIGATION LAW)

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PLACE/DATE/TIME                      Geneva Airport, 15 March 2003, 16:48 UTC.

AIRCRAFT                                ALITALIA, AZA593, ATR72,  
From Geneva to Milan Malpensa. (LIMC)

F-GLHK, M20M, private VFR flight  
From Muret-Lherm (LFBR) to Geneva

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ATC UNIT                                 Terminal Control, Geneva Tower, Aerodrome Control

CONTROLLERS                          Aerodrome Controller  
Trainee Controller

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AIRSPACE                                D

## HISTORY

On Saturday 15 March, at 15:04 UTC, the Mooney 20 M aircraft, registration F-GLHK, took off from Muret-Lherm (LFBR) aerodrome for a flight to Geneva airport.

It contacted Geneva Control Tower on frequency 118.7 MHz at 16:40, three minutes flight time to the south of St-Julien, in the direction of VFR reporting point Sierra.

The aerodrome controller, on-the-job training, cleared it for route VFR Sierra, i.e. in the direction of points Sierra Echo and Golf Echo. He indicated the runway in use, this being the grass runway 05 for VFR flights, as well as the QNH, 1031 hPa.

The pilot refused the grass runway because of the characteristics of the aircraft and requested the concrete runway for landing.

The aerodrome controller was handling a high traffic volume and did not immediately authorise the pilot for the aerodrome circuit for concrete runway 05.

The pilot of aircraft F-GLHK reported "nearby" of flying over Sierra Echo, when he was 2.5 NM south-west of this reporting point, when the controller cleared Alitalia flight 593, a type ATR72 aircraft, to line up behind a Boeing734 which was landing, flight Speedbird 9224.

The aerodrome controller requested the pilot of aircraft F-GLHK to report when over point Golf Echo and instructed him, after passing this point, to join the righthand aerodrome circuit for concrete runway 05.

The pilot of aircraft F-GLHK continued his flight, on a north heading, and passed point Sierra Echo well to the west in the direction of Golf Echo, making a perpendicular approach to concrete runway 05.

The aerodrome controller advised the pilot of F-GHLK of his position in the landing sequence and cleared the Alitalia 593 aircraft for take-off.

Still on a north heading, aircraft F-GLHK passed point Golf Echo well to the east, approaching the runway axis.

The pilot then initiated a left turn to join the righthand downwind, on a trajectory converging on the axis of runway 05.

At this time, the Alitalia ATR72 took off from runway 05 and the pilot almost immediately received a TCAS alert, followed by a resolution advisory. The aircraft was passing approximately 2500 ft in a climb.

The conflicting aircraft was 0.6 NM away, at its two o'clock, on a converging heading, at an altitude of 3000 ft.

No essential traffic information was provided by the aerodrome controller to the pilot of Alitalia flight 593 or to the pilot of aircraft F-GLHK.

The Alitalia aircraft's TCAS instructed the pilot to descend (DESCEND DESCEND) and to adjust his rate of descent (ROD) to 3000 ft/min. The pilot reacted immediately by stopping the climb, in order to maintain his altitude, and by reducing engine power. Only when the TCAS indicated clear of conflict did the pilot resume the normal climb, in accordance with the standard ATC clearance received.

The minimum separation between the two aircraft was a lateral separation of 0.5 NM and an altitude difference of 500 ft.

All times indicated in this report follow the UTC format.

The supervising aerodrome controller (coach) resumed control and instructed aircraft F-GLHK to turn to join the righthand downwind and, a little afterwards, cleared it to leave the altitude of 3000 ft and make the turn for final approach on concrete runway 05.

The pilot of Alitalia 593 informed the aerodrome controller that he had had a TCAS alert with resolution advisory (RA) instructing him to descend during the take-off phase.

The aerodrome controller acknowledged the message and handed over the aircraft to Departure Radar, frequency 121.3 MHz.

An ATIR (Air Traffic Incident Report) was submitted by the ATC unit.

A Flight Safety Report was submitted by the pilot of Alitalia flight 593.

## FINDINGS

- The runway in use in Geneva was runway 05.
- The grass runway was open to VFR traffic.
- The aerodrome controller was in possession of a valid licence.
- A trainee aerodrome controller was under his responsibility.
- All radio communications until the incident were made by the trainee aerodrome controller.
- Radio communications between the pilot of flight AZA593 and the aerodrome controller took place in English.
- Radio communications between the pilot of flight F-GLHK and the aerodrome controller took place in French.
- 13 aircraft were controlled on frequency 118.7MHz over a period of 11 minutes.
- At 16:40:42, first call from the pilot of aircraft F-GLHK on the TWR control frequency 118.7 MHz.
- At 16:40:59, the aerodrome controller cleared aircraft F-GLHK on route VFR Sierra for grass runway 05.
- Route VFR Sierra is as follows: Sierra, vertical St-Julien, Sierra Echo, vertical Port-Noir, Golf Echo, vertical Palace of the UNO. This latter compulsory reporting point precedes the ATC clearance to cross the axis of the concrete runway to join downwind grass runway 05. It is published in the VFR Switzerland Manual, under visual approach chart – OACI, LSGG VAC 20.
- At 16:42:01, the pilot of aircraft F-GLHK refused the grass runway and requested the concrete runway, referring to the difficulty of landing an aircraft with retractable landing gear on the grass runway.
- The aerodrome controller acknowledged the message, saying: “ok... we'll see about the traffic.”
- At 16:44:19, first call from the pilot of Alitalia aircraft 593 on the TWR frequency 118.7 MHz.
- At 16:45:02, the pilot of aircraft F-GLHK reported flying over point Sierra, in the direction of Sierra Echo.

All times indicated in this report follow the UTC format.

- At 16:46:38, the pilot of aircraft Alitalia 593 was cleared to line up on runway 05 for immediate departure.
- At 16:46:46, the pilot of aircraft F-GLHK reported that he was approaching Sierra Echo at 3500 ft.
- At this time, aircraft F-GLHK was 2.5 NM south-west of point Sierra Echo.
- The aerodrome controller requested the pilot to report when over point Golf Echo.
- At 16:47:03 the aerodrome controller cleared the pilot of aircraft F-GLHK to join the righthand circuit for concrete runway 05 after passing point Golf Echo and to maintain the altitude of 3000 ft until the base turn.
- The pilot read back this message. He was then 1.5 NM south-west of point Sierra Echo.
- At 16:47:46, the aerodrome controller cleared the pilot of Alitalia aircraft 593 for immediate take-off from runway 05.
- At this time, aircraft F-GLHK was passing 0.5 NM west of point Sierra Echo on a north heading, approximately.
- At 16:48:04 aircraft F-GLHK passed 0.9 NM east of point Golf Echo and started to make a left turn.
- At 16:48:26, according to the radar recording, appearance of the uncorrelated radar response of Alitalia aircraft 593 at an altitude of 1600 ft.
- According to the statements of the pilot of Alitalia aircraft 593, the TCAS resolution advisory (RA) ordered him to descend, at a rate of descent of 3000 ft/min, when he was passing 2500 ft in a climb.
- At this time, aircraft F-GLHK was passing 0.9 NM north of point Golf Echo on a west heading, approximately, converging on the route of Alitalia aircraft 593.
- At 16:48:46 the controller ordered the pilot of aircraft F-GLHK to turn left onto the righthand downwind.
- At this time, according to the radar recording, aircraft F-GLHK crossed the Alitalia aircraft 593 with a lateral separation of 0.5 NM, at an altitude of 3100 ft.
- According to his statement of 21 May 2003 made by telephone with the investigator, the pilot of aircraft F-GLHK stated that he had intended flying to Lausanne but, because of the wind strength, had finally opted for Geneva. He stressed that this was the first time he had flown to Geneva and that he had the appropriate flight documentation. He added that there was a lot of traffic, that he was expecting to receive instructions from aerodrome control and that he had not received any traffic information.
- The investigator was not able to check if the pilot had all the appropriate documents to made a VFR approach to Geneva.
- According to the statements of the supervising controller (coach), visual contact with the aircraft was lost in the vicinity of point Golf Echo. He added that visual contact, obstructed by the configuration of the Control Tower, could not be maintained during the righthand downwind concrete runway 05. In addition, radar identification is difficult to maintain, given the proximity of the radar antenna.
- The Alitalia airline submitted an incident report (Flight Safety Report).

All times indicated in this report follow the UTC format.

- The ATC unit submitted an ATIR (Air Traffic Incident Report).
- Weather: Geneva, bulletin at 16:20 UTC  
Wind 40 degrees 11 knots, variable between 010 and 080 degrees.  
Ceiling and visibility ok (CAVOK)  
Temperature: + 08°C  
QNH 1031 hPa  
NOSIG (no significant change).

## ANALYSIS

The pilot of aircraft F-GLHK contacted aerodrome control over point Sierra at an altitude of 3400 ft. He was in fact vertically above this reporting point. He then continued his flight, as authorised, in the direction of point Sierra Echo.

When the pilot reported that he was approaching point Sierra Echo at 3500 ft, he was 2.5 NM south-west of point Sierra Echo. The aerodrome controller then requested him to report when over point Golf Echo. A few moments later, when he was 1.5 NM south-west of point Sierra Echo, the aerodrome controller cleared him to join the righthand circuit for concrete runway 05, specifying "after passing point Golf Echo" and to maintain an altitude of 3000 ft until the base turn.

The controller anticipated the evolution of the trajectory of aircraft F-GLHK in the aerodrome circuit and gave very precise instructions, in accordance with the VFR arrival procedure.

Clearly, the pilot of aircraft F-GLHK did not follow the instructions he received.

Experiencing a high volume of traffic, the trainee controller did not give correcting instructions to the pilot of aircraft F-GLHK.

Convinced that the pilot was following the instructions he had given, he did not apparently check that they were being applied, nor did he observe the deviation of the aircraft from the route.

The supervising controller (coach) had left it to the trainee controller to integrate the VFR aircraft into the IFR arrival sequence, despite the high volume of traffic. He did this for didactic reasons, taking the level of the trainee's training into account. Probably he did not also check the application of the instructions given by the trainee, nor did he observe the deviation of the aircraft from the route.

Handling mixed VFR/IFR traffic on the single concrete runway, with aircraft having very different performance characteristics, is a difficult exercise.

Having lost the visual contact with the VFR traffic, the use of aerodrome control radar would have made it possible to complement or replace visual observation. The essential traffic information, particularly in a mixed VFR/IFR traffic environment, remains indispensable.

Concerning the TCAS (RA) alert of aircraft AZA 593:

For a Resolution Advisory "Descend Descend" the systematic ROD is 1500 ft/min. It exceeds this value only in very special cases. If the low avoiding rate of descent during this incident (resembling level-off) did not produce a more severe resolution advisory, for example "Increase Descent Increase Descent", it is because the 3000 ft/min are excessive.

All times indicated in this report follow the UTC format.

Advisories issued close to the ground:

When the aircraft is at 1000 ft  $\pm$  100 ft from the ground (distance provided by the radioaltimeter), the TCAS's level of sensitivity switches automatically to SL2, meaning that resolution advisories can no longer be generated. Since the accuracy of this mode change is 100 ft, it is possible that a descent RA is still issued when the aircraft is as low as 900 ft minimum from the surface. The pilot is then instructed to ignore this instruction, which, moreover, will disappear if the aircraft descends another 1 foot.

The TCAS is designed so that the resolution advisory (RA):

- "Increase Descent, Increase Descent" is not issued below 1450 ft AGL,
- "Descend, Descend" is not issued below 1100 ft AGL,
- any resolution advisory RA is not issued below 1000 +/-100 ft AGL.
- A "Ground Proximity Warning", for example "Terrain Terrain pull up" has priority over a resolution advisory (RA).

## CAUSE

The incident is due to the approximate navigation of aircraft F-GLHK, flying according to visual flight rules on the aerodrome circuit, without corrective intervention from aerodrome control.

Factors affecting the incident :

The high traffic volume being handled by a trainee aerodrome controller.

Berne, 15 September 2004

Aircraft Accident Investigation Bureau

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All times indicated in this report follow the UTC format.

**TRANSCRIPT OF TELEPHONY  
OR RADIOTELEPHONY COMMUNICATION TAPE-RECORDINGS**

Investigation into the **incident** that occurred on **15 March 2003**

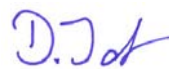
- Subject of transcript: **AZA593 / FGLHK**
- Centre concerned: Swiss Radar Area West
- Designation of unit: Terminal Control, Geneva Tower
- Frequency / Channel: 118.7 MHz MHz
- Date and period (UTC) covered by attached extract: 15 March 2003  
16:40 - 16:52 UTC
- Date of transcript: 5 May 2003
- Name of official in charge of transcription: Didier Javet

- Certificate by official in charge of transcription:

I hereby certify:

- That the accompanying transcript of the telephony or radiotelephony communication tape-recordings, retained at the present time in the premises of the Analysis Department, has been made, examined and checked by me.
- That no changes have been made to the entries in columns 2, 3 and 4, which contain only clearly understood indications in their original form.

Geneva, 5 May 2003

A handwritten signature in blue ink, appearing to read "D. Javet".

Didier Javet



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## Abbreviations

<u>Sector</u>	<u>Designation of sector</u>
TWR	- Terminal Control, Geneva Tower

<u>Aircraft</u>	<u>Callsign</u>	<u>Type of acft</u>	<u>Flight rules</u>	<u>ADEP</u>	<u>ADES</u>
FHK	- FGLHK	M20M	VFR	LFBR	- LSGG
7007	- Midland 7007	A320	IFR	EGLL	- LSGG
3748	- Lufthansa 3748	A320	IFR	EDDF	- LSGG
ILM	- IKELM	LJ35	IFR	LSGG	- LIMF
9224	- Speedbird 9224	B734	IFR	EIDW	- LSGG
HQK	- HBOQK		VFR	LSGG	-
593	- Alitalia 593	AT72	IFR	LSGG	- LIMC
1335	- Swiss 1335	A320	IFR	UDD	- LSGG
DAA	- DEPAA		VFR	LSGG	-
7224	- Airbaltic 7224	RJ70	IFR	LSGG	- EVRA
7845	- Scandinavian 7845	B732	IFR		- LSGG
818	- Egyptair 818	A320	IFR	LSGG	- HEGN
7052	- Ryanair 7052	B732	IFR	EIDW	- LSGG

To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
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**Frequency: 118.7 MHz Terminal Control, Geneva TOWER**

<b>TWR</b>	<b>FHK</b>	<b>16:40:42</b>	<b>Genève Tour de Fox Hotel Kilo, bonjour.</b>	
<b>FHK</b>	<b>TWR</b>	<b>44</b>	<b>Fox Hotel Kilo, Genève Tour, bonjour.</b>	
<b>TWR</b>	<b>FHK</b>	<b>47</b>	<b>C'est le Fox Golf Lima Hotel Kilo, je suis actuellement à trois minutes du point Sierra, heu... en descente vers trois mille cinq cents pieds, j'ai bien noté l'information et la zéro six en s, la zéro cinq en service.</b>	
<b>FHK</b>	<b>TWR</b>	<b>59</b>	<b>Fox Hotel Kilo, autorisé route Sierra, la piste zéro cinq gazon et le QNH mille trente et un.</b>	
<b>TWR</b>	<b>FHK</b>	<b>16:41:06</b>	<b>Bien reçu pour la zéro cinq, mille trente et un, Fox Hotel Kilo.</b>	
<b>TWR</b>	<b>7007</b>	<b>10</b>	<b>Midland seven double zero seven, two miles.</b>	
<b>7007</b>	<b>TWR</b>	<b>12</b>	<b>Midland seven zero zero seven, wind zero three zero degrees, one one knots, runway zero five, cleared to land.</b>	
<b>TWR</b>	<b>7007</b>	<b>17</b>	<b>Cleared to land, runway zero five, Midland seven double zero seven.</b>	
<b>3748</b>	<b>TWR</b>	<b>20</b>	<b>Lufthansa three seven four eight, reduce to minimum approach speed to permit departure.</b>	
<b>TWR</b>	<b>3748</b>	<b>26</b>	<b>Lufthansa three seven four eight, minimum approach speed.</b>	
<b>FHK</b>	<b>TWR</b>	<b>51</b>	<b>Foxtrot Hotel Kilo, la piste zéro cinq gazon.</b>	
<b>TWR</b>	<b>FHK</b>	<b>56</b>	<b>Je vous ai pas reçu Madame, zéro cinq, pardon?</b>	
<b>FHK</b>	<b>TWR</b>	<b>59</b>	<b>La zéro cinq <u>gazon</u>.</b>	
<b>TWR</b>	<b>FHK</b>	<b>16:42:01</b>	<b>Oh négatif, Madame, la... la, la zéro cinq en dur hein, c'est un train rentrant... difficile à poser.</b>	
<b>FHK</b>	<b>TWR</b>	<b>06</b>	<b>D'accord alors rappelez Sierra Echo et on va... voir avec le trafic.</b>	
<b>TWR</b>	<b>FHK</b>	<b>11</b>	<b>Donc, je rappelle Sierra Echo, Fox Hotel Kilo.</b>	

TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
ILM	TWR	16:42:25	India Lima Mike, line up runway zero five, intersection Zulu, keep ready.	
TWR	ILM	30	Roger, Lima Mike..., line up zero five... Zulu, hein, ready.	
7007	TWR	49	Midland seven zero zero seven, right here, contact Apron one two one decimal seven five, bye-bye.	
TWR	7007	54	????? right, one two one seven five, Midland seven double zero seven, au revoir.	Unreadable
ILM	TWR	16:43:11	India.	Transmission cut
TWR	9224	11	????? bonjour, Speedbird nine two two four is eight and a half miles, runway zero five.	Unreadable
ILM	TWR	16	India Lima Mike, wind zero three zero degrees, niner knots, runway zero five, intersection Zulu, cleared for immediate take-off, traffic two miles final.	
TWR	ILM	23	Roger, India Lima Mike, rolling.	
3748	TWR	25	Lufthansa three seven four eight, wind zero three zero degrees, eight knots, continue approach, traffic on the roll.	
TWR	3748	31	Lufthansa three seven four eight, continuing approach.	
TWR	HQK	38	Geneva Tower, Hotel Bravo Oscar Quebec Kilo, holding bay zero five grass, outbound November, ready for departure.	
3748	TWR	48	Lufthansa three seven four eight, wind zero three zero degrees, eight knots, runway zero five, cleared to land.	
TWR	3748	53	Lufthansa three seven four eight, cleared to land zero five.	
9224	TWR	55	Speedbird nine two two four, Geneva Tower, hello, report two miles.	
TWR	9224	59	Speedbird nine two two four, wilco.	
HQK	TWR	16:44:01	Hotel Quebec Kilo, Geneva Tower, bonjour, wind zero three zero degrees, eight knots, runway zero five grass, cleared for take-off, route November.	
TWR	HQK	09	Cleared for take-off, route November on zero five grass, Hotel Kilo Quebec.	

Signature of person in charge of transcription :

## TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
ILM	TWR	16:44:13	India Lima Mike, contact Departure, one two one decimal three, bye-bye.	
TWR	ILM	17	One two one decimal three, bye-bye.	
TWR	593	19	<b>Tower, bonjour, Alitalia five niner three.</b>	
593	TWR	23	<b>Alitalia five niner three, Geneva Tower, hello, report ready.</b>	
TWR	593	27	<b>Wilco, Alitalia five niner three.</b>	
TWR	1335	35	La Tour, bonsoir, Swiss one three three five, established ILS zero five, speed one sixty.	
1335	TWR	41	Swiss one three three five, Geneva Tower, hello, report two miles.	
TWR	1335	44	Will call you two miles, one three three five.	
TWR	DAA	48	Geneva Tower, bonjour, Delta Echo Papa Alfa Alfa, ready holding point zero five grass.	
DAA	TWR	54	Delta Echo Papa Alfa Alfa, roger, hold short runway zero five grass.	
TWR	DAA	16:45:00	Delta Alfa Alfa.	
TWR	FHK	02	<b>Hotel Kilo, je passe Sierra vers Sierra Echo.</b>	
FHK	TWR	04	<b>Fox Hotel Kilo, compris.</b>	
3748	TWR	07	Lufthansa three seven four eight, contact Apron, one two one decimal seven five, bye-bye.	
TWR	3748	11	One two one seven five, Lufthansa three seven four eight, bye-bye.	
9224	TWR	15	Speedbird niner two two four, wind zero two zero degrees, eight knots, runway zero five, cleared to land.	
TWR	9224	22	Cleared land zero five, Speedbird nine two two four.	
DAA	TWR	24	Delta Alfa Alfa, wind zero two zero degrees, seven knots, runway zero five grass, cleared for take-off, route November, preceding also route November.	

Signature of person  
in charge of transcription :

## TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
TWR	DAA	16:45:32	Cleared to take-off, heu... zero five grass and proceed to November point, Delta Alfa Alfa.	
DAA	TWR	45	Delta Alfa Alfa, look out, preceeding aircraft is also cleared via route November.	
TWR	DAA	49	Alfa Alfa, we have it in sight.	
TWR	7224	56	Tower, good evening, Air Baltic seven two two four.	
7224	TWR	16:46:01	Bravo Tango India seven two two four, Geneva Tower, bonjour, report ready.	
TWR	7224	05	Call you ready, seven two two four.	
593	TWR	22	Italia five nine three, confirm you're ready?	Beginning cut
TWR	593	25	Affirmative, we are ready for departure, any time, Alitalia five niner three.	
593	TWR	27	Roger, behind landing Boeing seven three seven, line up runway zero five and keep ready.	
TWR	593	32	Behind landing traffic, line up and... wait behind Alitalia five niner three.	
593	TWR	38	Line up and keep ready.	
TWR	593	41	Line up and keep ready, the Alitalia five niner three.	
593	TWR	43	Roger.	
TWR	FHK	46	<i>Fox Hotel Kilo, j'approche Sierra Echo, trois mille cinq cents pieds.</i>	
FHK	TWR	49	<i>Fox Hotel Kilo, rappelez Golf Echo.</i>	
TWR	FHK	53	<i>Je rappelle Golf Echo, Fox Hotel Kilo.</i>	
FHK	TWR	16:47:03	<i>Fox Hotel Kilo, après Golf Echo, rejoignez circuit main droite, piste zéro cinq béton, minimum trois mille pieds jusqu'au virage de base.</i>	
TWR	FHK	13	<i>Rejoins une vent arrière... piste à droite, pour le..., à trois mille pieds, Fox é, heu..., Hotel Kilo.</i>	

Signature of person  
in charge of transcription :

## TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
<b>FHK</b>	<b>TWR</b>	<b>16:47:20</b>	<b>Fox Hotel Kilo, numé, vous êtes numéro deux, numéro un un Airbus trois vingt, quatre nautiques final.</b>	
<b>TWR</b>	<b>FHK</b>	<b>26</b>	<b>Fox Hotel Kilo.</b>	
9224	TWR	29	Speedbird, rapidly next right into Bravo then contact Apron one two one decimal seven five, bye-bye.	
TWR	9224	35	Right on Bravo, Apron, one two one seven five, nine two two four, bye-bye.	
1335	TWR	38	Swiss one three three five, wind zero three zero degrees, one one knots, continue approach, traffic one the roll.	
TWR	1335	43	We have the traffic in sight, one three three five.	
<b>593</b>	<b>TWR</b>	<b>46</b>	<b>Alitalia five niner three, wind zero three zero degrees, one one knots, runway zero five, cleared for take-off, immediate.</b>	
<b>TWR</b>	<b>593</b>	<b>53</b>	<b>Cleared for take-off zero five, Alitalia five niner three.</b>	
TWR	7224	16:48:02	Air Baltic... seven two two four, ready at any time.	
7224	TWR	06	Bravo Tango India seven two two four, roger.	
1335	TWR	19	Swiss one three three fi, three five, wind zero three zero degrees, one one knots, runway zero five, cleared to land.	
TWR	1335	25	Roger, cleared to land runway zero five, Swiss one three three five.	
<b>FHK</b>	<b>TWR</b>	<b>37</b>	<b>Foxtrot Hotel Kilo, confirmez le trafic Airbus en vue?</b>	
TWR	HQK	42	Negatif, Hotel Quebec Kilo.	Aircraft answering is not FGLHK
<b>FHK</b>	<b>TWR</b>	<b>46</b>	<b>Foxtrot Hotel Kilo, tournez maintenant à gauche... et rejoignez vent arrière main droite.</b>	
<b>TWR</b>	<b>FHK</b>	<b>51</b>	<b>Je continue de virer à gauche et... rejoins la vent arrière main droite, Fox Hotel Kilo.</b>	
<b>593</b>	<b>TWR</b>	<b>16:49:05</b>	<b>Alitalia five niner three, contact Departure, one two one decimal three, bye-bye.</b>	

Signature of person  
in charge of transcription :

## TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
TWR	593	16:49:09	One two one decimal three, Alitalia five nine three and just for information, we had a TCAS descent during the... the take-off. Just... to ?????, please.	Unreadable
FHK	TWR	18	<i>Fox Hotel Kilo, virez maintenant en final zéro cinq béton et autorisé à quitter trois mille pieds.</i>	Coach taking over
TWR	FHK	23	<i>Je... vire en étape de base, Fox Hotel Kilo.</i>	
FHK	TWR	26	<i>Vous virez <u>directement</u> en final pour la zéro cinq béton et ent, autorisé à quitter trois mille.</i>	
TWR	FHK	31	<i>Directement en final, Fox Hotel Kilo.</i>	
593	TWR	33	Alitalia five nine three, roger, this is copied, contact Departure one two one three, ciao.	
TWR	593	37	Bye.	
7845	TWR	45	Scandinavian seven eight four five, Geneva Tower?	Student speaking No reply
1335	TWR	51	Swiss one three three five, contact Apron, one two one decimal seven five, bye-bye.	
TWR	1335	55	One two one seven five, Swiss one three three five, ciao Sandra.	
1335	TWR	16:50:02	Hallo!	
FHK	TWR	06	<i>Foxtrot Hotel Kilo, le vent zéro trente degrés, onze nœuds, autorisé atterrissage, piste zéro cinq, attention aux turbulences du sillage et quittez la piste en Zulu.</i>	
TWR	FHK	18	<i>Je me pose, Fox Hotel Kilo.</i>	
FHK	TWR	20	<i>Et je confirme, vous sortez première à gauche, par Zulu, s'il vous plaît.</i>	Coach taking over
TWR	FHK	24	<i>Première à gauche, Zulu, Fox Hotel Kilo.</i>	
TWR	7845	27	Tower, good... afternoon, Scandinavian seven eight four five, established on the ILS runway zero five.	
7845	TWR	33	Scandinavian seven eight four five, Geneva Tower, hello, reduce to minimum approach speed, due to traffic.	Student speaking

Signature of person  
in charge of transcription :

TRANSCRIPT SHEET



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
TWR	7845	16:50:39	Minimum approach speed, Scandinavian seven eight four five.	
TWR	818	43	Geneva Tower, good afternoon, Egyptair eight one eight.	
818	TWR	48	Egyptair eight one eight, Geneva Tower, hello.	
TWR	HQK	55	Hotel Quebec Kilo, November, three thousand five hundred feet.	
HQK	TWR	59	Hotel Quebec Kilo, report abeam Morges, maximum three thousand five hundred feet.	
TWR	HQK	16:51:04	Maintaining three thousand five hundred feet, will report Morges, Hotel Quebec Kilo.	
TWR	DAA	12	Delta Alfa Alfa, also November, three thousand five hundred.	
DAA	TWR	16	Delta Alfa Alfa, report abeam Morges, maximum three thousand five hundred feet.	
DAA	TWR	21	Maximum three thousand five hundred and we are proceeding via Sierra Papa Romeo, Alfa Alfa.	
TWR	DAA	27	Roger, Delta Alfa Alfa, that's copied.	
TWR	7052	33	Tower, good afternoon, Ryanair seven zero five two, full localizer established at XXXXX.	Probably "twelve and a half"
7052	TWR	38	Ryanair seven zero five two, Geneva Tower, hello, report two miles.	
TWR	7052	42	Report two miles, Ryanair seven zero five two.	
7845	TWR	16:52:07	Scandinavian seven eight four five, wind zero three zero degrees, one zero knots, continue approach, traffic about to vacate.	
TWR	7845	14	Continue approach, Scandinavian one seven, XXXXX, seven eight four five.	Noise of disagreement
<b>FHK</b>	<b>TWR</b>	<b>19</b>	<b>Foxtrot Hotel Kilo, contactez le sol, cent vingt et un decimal soixante-sept, au-revoir.</b>	
<b>TWR</b>	<b>FHK</b>	<b>23</b>	<b>Cent vingt et un soixante-cinq, au-revoir madame, merci.</b>	

Signature of person in charge of transcription :



TRANSCRIPT SHEET



To <u>Col.1</u>	From <u>Col.2</u>	Time <u>Col.3</u>	Communications <u>Col.4</u>	Observations <u>Col.5</u>
<b>FHK</b>	<b>TWR</b>	<b>16:52:25</b>	<b>Négatif, cent vingt et un décimal soixante-sept.</b>	
<b>TWR</b>	<b>FHK</b>	<b>29</b>	<b>Cent vingt et un soixante-sept, Fox Hotel Kilo.</b>	

Signature of person  
in charge of transcription :

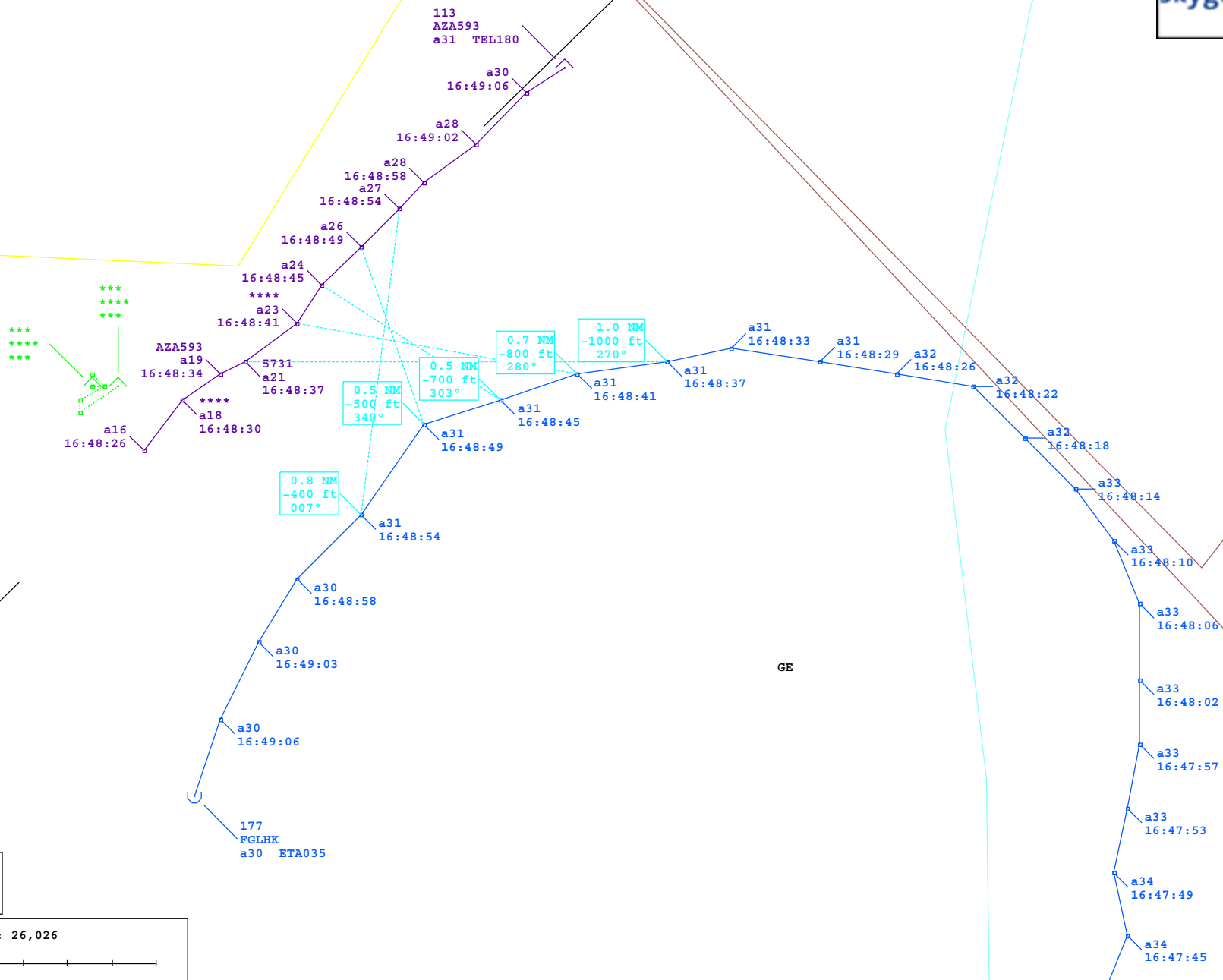
A handwritten signature in blue ink, appearing to be "D.J. de".

Src  
APP  
APN

Analysis: Airprox AZA593 / FGLHK Time [UTC]: 15.03.2003 16:49:13



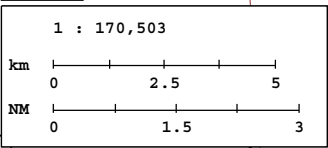
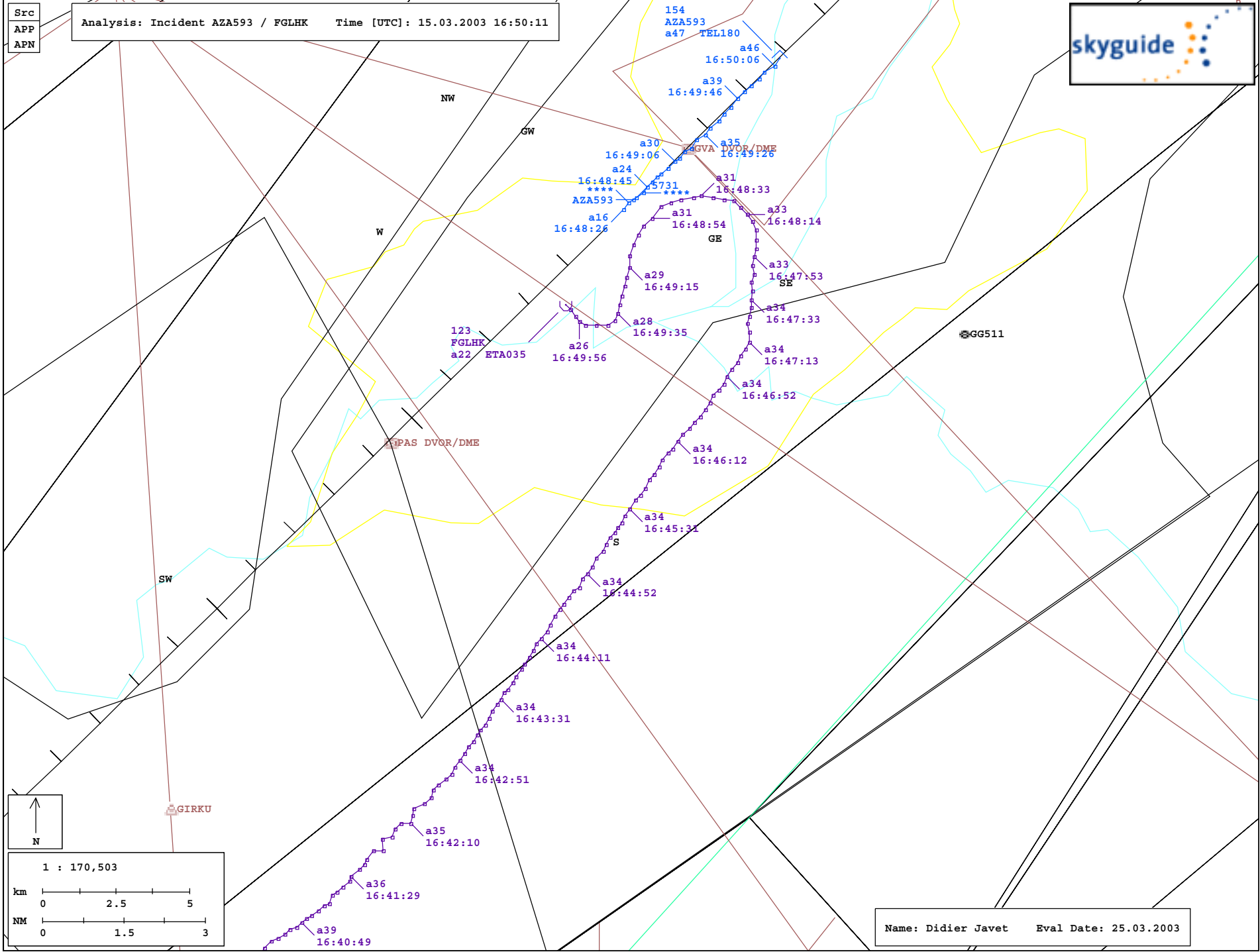
113  
AZA593  
a31 TEL180



Name: Didier Javet Eval Date: 23.04.2003

Src  
APP  
APN

Analysis: Incident AZA593 / FGLHK Time [UTC]: 15.03.2003 16:50:11



Name: Didier Javet Eval Date: 25.03.2003