

Final Report of the Aircraft Accident Investigation Bureau

concerning the incident (Airprox)

between GNR310A and GMI2139

on 17 November 2003

SOUTH KORED

FINAL REPORT

AIR TRAFFIC INCIDENT REPORT (ATIR)

AIRPROX (NEAR MISS)

This report serves exclusively to prevent accidents. The legal assessment of accident/incident causes and circumstances is no concern of the incident investigation. (Art. 24 of the Air Navigation Law). The masculine form is used in this report regardless of gender for reasons of data protection.

PLACE/DATE/TIME SOUTH KORED, 17.11.2003, 18:51 UTC

AIRCRAFT GNR310A, Boeing 737-8, EC-HMK,
Futura International Airways operating for
Gambia International Airlines,
Flight from Banjul, Saragosse to Munich

GMI2139, Fokker 100, D-AGPF,
Germania Fluggesellschaft
Flight from Lisbon to Munich

ATC UNIT Swiss Radar Area West, UAC,
Sectors MS5/MA5

CONTROLLER Radar Controller M5 (Coach)

Coordinator M5

Radar Controller M5 (in training)

AIRSPACE C

HISTORY

On Monday 17 November 2003 at 18:36 UTC, the pilot of an aircraft type Fokker 100 of the Germania company, GMI2139, a scheduled flight from Lisbon to Munich, called on frequency 124.030 MHz of coupled sectors MS4/MA4 and reported flight level 340, en route towards OMASI. The radar controller cleared him on direct route DITON, at flight level 340. Eleven minutes later, he instructed the pilot of flight GMI2139 to descend to flight level 320, a level coordinated with the Zurich sector, and handed him over to frequency 134.605 MHz of Zurich sector U2.

At the same time, the pilot of an aircraft type Boeing 737-800 of the Futura International Airways, which was flying for the Gambia International Airlines, GNR310A, a scheduled flight from Banjul, Saragosse to Munich, called on frequency 128.155 MHz of coupled sectors MS5/MA5 and reported flight level 360. The radar controller, a trainee working under supervision, identified it and cleared it on route LAMUR-DITON, at flight level 360. The pilot indicated that he was maintaining speed Mach 0.81. The radar controller replied to him: "*speed is at your discretion*". Since flight GNR310A had been handed over to Zurich sector U2 at flight level 330, oral coordination took place for its descent between the coordinator of sector MS5/MA5 and the coordinator of sector MS4/MA4. Flight level 330 as being the exit flight level of the Geneva area was coordinated.

At 18:49, the radar controller instructed the pilot of flight GNR310A to descend to flight level 300 instead of flight level 330 as coordinated, at a rate of descent of 2000 ft per minute or more. The pilot read back flight level 300 correctly, but the read-back of the rate of descent is not comprehensible "xxxx thousand feet per minute or more". The radar controller did not repeat his request for a rate of descent and did not notice that he had given an erroneous flight level.

At 18:51, the STCA (Short Term Conflict Alert) indicated a proximity alert in sector MS5/MA5. In fact, flight GNR310A was passing flight level 327, descending, and flight GMI2139 was maintaining flight level 320. The radar controller instructed the pilot of flight GNR310A to climb immediately to flight level 330 and informed him that he had been instructed to descend to flight level 330. The pilot read back "*climbing three three zero*" and "*er ... copied, we had in TCAS... but we... were cleared to three hundred*". The radar controller did not dispute this fact.

At 18:52, flight GNR310A reached flight level 330 and was handed over to Zurich sector U2 frequency 134.605 MHz.

FINDINGS

- The incident took place at 18:51:01, 15 NM SSW of KORED, in class C airspace at flight level 320.
- Instrument flight rules were being applied.
- At the time of the incident, flight GMI2139 was in contact with Zurich sector U2.
- At the time of the incident, flight GNR310A was under radar control and in contact with Geneva sector MS5/MA5.
- The coach radar controller and the coordinator were in possession of appropriate licences.
- The radar controller in charge of traffic was a controller in training

All times indicated in the report are in the UTC format (local time – 1)

- The route of flights GMI2139 and GNR310A was TDP - OMASI - LAMUR.
- Radio communications between the pilot of flight GMI2139, the pilot of flight GNR310A and the radar controller took place in English.
- According to the depositions of the three controllers, only the trainee controller worked with a headset.
- At 18:49, flight GNR310A was authorised by the trainee controller to descend to flight level 300 instead of flight level 330 as envisaged. The pilot read back flight level 300.
- Neither of the two controllers who were working in sector MS5/MA5 reacted to this erroneous clearance or its readback.
- On the control strip, flight level 330 was entered by the trainee controller as the cleared flight level.
- The Boeing 737-8 of flight GMI2139 as well as the Fokker 100 of flight GNR310A were equipped with a TCAS (traffic alert and collision avoidance system).
- At 18:51:01, the STCA indicated a proximity alert in sector MS5/MA5. According to the radar recordings, the two aircraft were on a slightly converging heading. Flight GMI2139 was flying at 405 kt and flight GNR310A at 435 kt.
- At 18:51:38, according to the radar recordings the minimum vertical distance was 100 ft with a lateral distance of 4.2 NM, then the aircraft passed at 3.7 NM and 700 ft at 18:52:14.
- Flight GNR310A descended to flight level 318 before climbing back to flight level 330.
- The sector MS5/MA5 coordinator carried out coordination verbally with sector MS4/MA4 for the descent of flight GNR310A.
- The controllers of sectors MS4/MA4 (flight levels 315 to 354) and MS5/MA5 (flight levels 355 to 600) were working at the same control unit, i.e. side by side.
- According to the three controllers' statements, the traffic load in sector MS5/MA5 was low.
- According to the record of the trainee radar controller's statement, he was sure he had cleared flight GNR310A to flight level 330, not flight level 300.
- Late information did reach us from the Gambia Civil Aviation Authority informing us that the Gambia International Airlines did not own any Boeing 737-800 aircraft and that this flight was made by the Futura International Airways.
- The Futura International Airways company confirmed to us that it had made this flight on 17 November 2003 and sent us the CMD's report.
- The report of the CMD of flight GNR310A, received on 16 August 2004, indicates that he had been cleared to descend to flight level 320. At the time he initiated his descent, his TCAS informed him that he had traffic in front of him, at a distance of about 10 to 15 NM, but never issued a TA (traffic advisory) or an RA (resolution advisory). This is in contradiction with the recordings of the radio communications.
- According to the report of the CMD of flight GMI2139, the latter did not notice anything.
- Weather: QAO-A1 : 15Z-21Z FL 300 020/045 FL 340 030/045 FL 390 360/050

ANALYSIS

Flight GMI2139 and flight GNR310A were following the same route TDP - OMASI - LAMUR and had the same destination, Munich. The two aircraft were flying parallel at a lateral distance of 4 NM and an altitude separation of 2000 ft. Flight GNR310A was slightly behind, on a heading a few degrees to the left and was flying at a higher speed. As a result its trajectory was gradually closing on the trajectory of flight GMI2139.

Flight GMI2139 was in radio contact with and under radar control of sector MS4/MA4. At 18:47:08, the radar controller instructed it to descend to flight level 320, a level coordinated with Zurich sector U2. At 18:49:21, it was handed over to Zurich sector U2 frequency 134.605 MHz.

Flight GNR310A was in radio contact with and under radar control of sector MS5/MA5 at flight level 360. At 18:49:02, after oral coordination with sector MS4/MA4, the trainee radar controller instructed it to descend to flight level 300 at a rate of descent of 2000ft ft per minute or more, instead of the coordinated level 330. The latter entered flight level 330 on his control strip but transmitted flight level 300 on the frequency, without being able to explain the reason for this. The pilot read back flight level 300 correctly. However, his read-back of the rate of descent is incomprehensible on the recording. The radar controller did not consider it necessary to repeat the required rate of descent. Three controllers were working in this sector and none of them noticed that flight level 300 was incorrect. None of the sector controllers detected this erroneous flight level. The fact that they were not wearing headsets may have played a role in the incident.

At 18:51:01, the sector controllers were alerted by the STCA alarm. In fact, flight GNR310A was passing flight level 327, descending, whilst flight GMI2139, on Zurich U2 frequency, was maintaining flight level 320. The radar controller immediately instructed the pilot to climb to flight level 330 and informed him that he had been cleared for flight level 330. The pilot confirmed that he was climbing to level 330, but that he had had been cleared to flight level 300. The radar controller did not dispute this fact.

CAUSE

Issuing by the trainee radar controller of an incorrect flight level clearance, detected by neither the coach nor by the coordinator.

Factor affecting the evolution of the incident:

The fact that the coach and the coordinator were not wearing headsets.

Berne, 17 June 2005

Aircraft Accident Investigation Bureau

THIS REPORT SERVES EXCLUSIVELY TO PREVENT ACCIDENTS. THE LEGAL ASSESSMENT OF ACCIDENT/INCIDENT CAUSES AND CIRCUMSTANCES IS NO CONCERN OF THE INCIDENT INVESTIGATION
(ART. 24 OF THE AIR NAVIGATION LAW)

All times indicated in the report are in the UTC format (local time – 1)

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

Investigation into the **incident** that occurred on **17.11.2003**

- Subject of transcript: **GNR310A / GMI2139**

- Centre concerned: Swiss Radar Area West

- Designation of unit: Swiss UAC, control sectors MOLUS4/MILPA4 & MOLUS5/MILPA5

- Frequency / Channel: 124.030/134.315 MHz & 128.155/133.630 MHz

- Date and period (UTC) covered by attached extract: 17.11.2003
18:36 - 18:59 UTC

- Date of transcript: 1 December 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, 1 December 2003



Didier JAVET

Abbreviations

Sector Designation of sector

MS4 - Swiss UAC, coupled control sectors MOLUS4 & MILPA4
 MS5 - Swiss UAC, coupled control sectors MOLUS5 & MILPA5
 ZRH - Swiss UAC, Zurich ATC

| <u>Aircraft</u> | - | <u>Callsign</u> | <u>Type of acft</u> | <u>Flight rules</u> | <u>ADEP</u> | - | <u>ADES</u> |
|-----------------|---|----------------------------------|---------------------|---------------------|-------------|---|-------------|
| 2139 | - | Germania 2139 | F100 | IFR | LPPT | - | EDDM |
| 529 | - | British 529 | B733 | IFR | LIMC | - | EGCC |
| 310A | - | Gambia International 310A | B738 | IFR | LEZG | - | EDDM |
| 9202 | - | Lauda Air 9202 | B737 | IFR | GCLP | - | LOWI |
| FBV | - | FWWBV | A320 | IFR | EDHI | - | LFBO |
| 5791 | - | Lufthansa 5791 | CRJ7 | IFR | LFBO | - | EDDF |
| 2604 | - | Speedbird 2604 | B734 | IFR | EGKK | - | LIRP |
| 664 | - | Hapag-Lloyd 664 | B738 | IFR | GCLP | - | EDDM |

OGED / 1 December 2003

TRANSCRIPT SHEET

Occurrence: GNR310A / GMI2139 of 17.11.2003



| To Col.1 | From Col.2 | Time Col.3 | Communications Col.4 | Observations Col.5 |
|-------------|---------------|---------------|-------------------------|-----------------------|
|-------------|---------------|---------------|-------------------------|-----------------------|

Coupled Frequencies: 124.030 MHz & 134.315 MHz, Swiss UAC MOLUS4 & MILPA4

| | | | |
|------|------|----------|---|
| MS4 | 2139 | 18:36:06 | Heu... Swiss..., bonsoir, Germania two one three niner, flight level three four zero, we are inbound OMASI. |
| 2139 | MS4 | 14 | Germania two one three niner, bonjour, cleared direct DITON, flight level three four zero. |
| MS4 | 2139 | 18 | DITON, flight level three four zero. |
| 2139 | MS4 | 23 | British five two nine, confirm you want to climb to three six zero? |
| MS4 | 2139 | 28 | Heu... you mean Germania two one three... niner? |
| 2139 | MS4 | 31 | Negative it was British five two nine. |

Sector in contact with:

- BRT529 (2x)
- AUI951
- DLH4455
- DBR1067
- AZA207
- AFR2304
- DLH4455
- JKK165
- IBE4579
- VEX38G
- AFR2304
- ANS8685
- IBE4579

| | | | |
|------|------|----------|---|
| 2139 | MS4 | 18:47:08 | Germania two one three nine, descend flight level three two zero. |
| MS4 | 2139 | 11 | Descending three two zero, Germania two one three niner. |

Sector in contact with:

- DAT3182
- DBR1067
- VEX38G
- IBE4579
- AZA241

Signature of person in charge of transcription :

TRANSCRIPT SHEET



Occurrence: GNR310A / GMI2139 of 17.11.2003

| To Col.1 | From Col.2 | Time Col.3 | Communications Col.4 | Observations Col.5 |
|-------------|---------------|---------------|---|-----------------------|
| 2139 | MS4 | 18:49:21 | Germania two one three nine, contact Radar on one three four decimal six zero five, good night. | |
| MS4 | 2139 | 26 | One three four six zero five, Germania two one three niner, goodbye. | |

Coupled Frequencies: 128.155 MHz & 133.630 MHz, Swiss UAC MOLUS5 & MILPA5

| | | | | |
|------|------|----------|--|-------------------|
| MS5 | 310A | 18:36:44 | Swiss Radar, good day, this is ... Golf November Romeo three one zero Alfa, level three six zero. | |
| 310A | MS5 | 49 | Golf November Romeo three ten Alfa is identified, flight level three six zero, cleared LAMUR – DITON. | |
| MS5 | 310A | 56 | LAMUR – DITON, heu... we're restricted at ??????. | Unreadable |
| 310A | MS5 | 18:37:00 | XXXXXX, say again, Sir. | Could be "Please" |
| MS5 | 310A | 01 | Yes, do we... we are maintaining now Mach point eight one. | |
| 310A | MS5 | 06 | Okay, speed is at your discretion, Sir and it's LAMUR – DITON, Delta India Tango Oscar November. | |
| MS5 | 310A | 15 | LAMUR, thank you. | |
| 310A | MS5 | 17 | Roger and after LAMUR it's DITON. | |
| MS5 | 310A | 20 | XXXXXX, thank you. | Could be "DITON" |
| 310A | MS5 | 26 | And LAMUR, just to confirm, next point after LAMUR, Sir, will be DITON, Delta India Tango Oscar November. | |
| MS5 | 310A | 35 | DITON, thank you very much, Sir. | |
| MS5 | 9202 | 18:39:20 | Swiss, bonsoir, Lauda niner two zero two, three eight zero, inbound... SOPLO. | |
| 9202 | MS5 | 26 | Laudair niner two zero two, bonsoir, identified, cleared direct to LAMUR – DITON, flight level three eight zero. | |
| MS5 | 9202 | 35 | LAMUR – DITON..., I understand, niner two zero two, confirm? | |
| 9202 | MS5 | 40 | LAMUR, Lima Alfa Mike Uniform Romeo and then DITON. | |

Signature of person
in charge of transcription :

TRANSCRIPT SHEET



Occurrence: GNR310A / GMI2139 of 17.11.2003

| To Col.1 | From Col.2 | Time Col.3 | Communications Col.4 | Observations Col.5 |
|-------------|---------------|-----------------|--|---------------------------|
| MS5 | 9202 | 18:39:45 | LAMUR – DITON, niner two zero two. | |
| 9202 | MS5 | 49 | Roger, Sir and for the next eighty miles at flight level three eight zero, you may expect some light turbulence. | |
| MS5 | 9202 | 56 | That's what we've had for the last... six seven miles, niner two zero two. | |
| FBV | MS5 | 18:40:00 | Foxtrot Bravo Victor, contact Marseilles on one one eight eight eight zero, au revoir. | |
| MS5 | FBV | 07 | One one eight eight eight zero, bonne soirée. | |
| 5791 | MS5 | 18:46:53 | Lufthansa five seven niner one, contact Swiss Radar on one three three decimal four zero five. | Change of controller |
| MS5 | 5791 | 58 | One three three four zero five, Lufthansa five seven nine one, goodbye. | |
| 5791 | MS5 | 18:47:01 | Good night. | |
| MS5 | 2604 | 18:48:45 | Swiss, good evening, Speedbird two six zero four, flight level three seven zero, direct MOKIP. | |
| 2604 | MS5 | 52 | Speedbird two six zero four, Swiss Radar, identified..., maintain flight level three seven zero, cleared to Geneva – Torino. | |
| MS5 | 2604 | 59 | Cleared Geneva – Torino, Speedbird two six zero four. | |
| 310A | MS5 | 18:49:02 | <i>Gambia three one zero Alfa, descend to flight level three zero zero now.</i> | |
| MS5 | 310A | 08 | <i>Level three zero zero, Gambia three one zero Alfa.</i> | |
| 310A | MS5 | 12 | <i>Affirm and rate of descend, two thousand feet per minute or more, please.</i> | |
| MS5 | 310A | 15 | <i>XXXXX thousand feet per minute or more, three one zero Alfa.</i> | <i>Could be "Fifteen"</i> |
| 9202 | MS5 | 54 | Lauda nine two zero two, start descend to flight level three two zero to be leveled within next four zero miles, please. | |
| MS5 | 9202 | 18:50:03 | We... start descent three two zero to be with level, within the next four zero miles, any chance direct ????? from present, Lauda nine two zero two? | Unreadable |

Signature of person in charge of transcription :

TRANSCRIPT SHEET

Occurrence: GNR310A / GMI2139 of 17.11.2003



| To Col.1 | From Col.2 | Time Col.3 | Communications Col.4 | Observations Col.5 |
|-------------|---------------|-----------------|---|-------------------------|
| 9202 | MS5 | 18:50:14 | Standby, I call you back. | |
| MS5 | 9202 | 15 | Merci. | |
| 9202 | MS5 | 20 | Lauda nine two zero two, direct to KUDES. | |
| MS5 | 9202 | 23 | KUDES, niner two zero two. | |
| 664 | MS5 | 30 | Hapag-Lloyd six six four, descend to flight level three four zero to be leveled within next two zero miles, please. | |
| MS5 | 664 | 36 | Descend and maintain level three four zero to be leveled within two zero miles, confirm? | |
| 664 | MS5 | 40 | Affirm. | |
| MS5 | 664 | 41 | Hapag-Lloyd six six four. | |
| 310A | MS5 | 18:51:05 | Gambia three one zero Alfa, report level. | |
| MS5 | 310A | 10 | Three... three two two..., Gambia three one zero Alfa. | |
| 310A | MS5 | 14 | Gambia three one zero Alfa, climb immediately to flight level three three zero, please. | |
| MS5 | 310A | 22 | Climbing three three zero, three one zero Alfa. | |
| 310A | MS5 | 24 | Affirm. | |
| 310A | MS5 | 26 | You were instructed to descend to flight level three three zero. | |
| MS5 | 310A | 29 | Heu... copied, we have in TCAS... but we... were cleared to three hundred. | |
| 310A | MS5 | 18:52:51 | Gambia. | <i>Transmission cut</i> |
| MS5 | 310A | 54 | Yes, go ahead for Golf November Romeo three one zero Alfa. | |
| 310A | MS5 | 58 | Gambia three one zero Alfa, now contact Swiss Radar on one three four decimal six zero five. | |
| MS5 | 310A | 18:53:04 | Three four six zero five, bye-bye. | |
| 310A | MS5 | 06 | Bye-bye. | |

Signature of person in charge of transcription :

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

Investigation into the **incident** that occurred on **17.11.2003**

- Subject of transcript: **GNR310A / GMI2139**

- Centre concerned: Swiss Radar Area East

- Designation of unit: Zurich Upper2 Sector

- Frequency / Channel: 134.605MHz

- Date and period (UTC) covered by attached extract: 17.11.2003
18:49:50 - 18:53:40 UTC

- Date of transcript: 26 November 2003

- Name of official in charge of transcription: Bettina COMTE

- 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.

Zürich, 26 November 2003

A handwritten signature in blue ink, appearing to read "B. Comte".

Bettina COMTE

Abbreviations

Sector Designation of sector

U2 RE - Zurich Upper2 Sector Radar Executive

| <u>Aircraft</u> | - | <u>Callsign</u> | | <u>Type of acft</u> | <u>Flight rules</u> | <u>ADEP</u> | - | <u>ADES</u> |
|-----------------|---|-----------------|-----------------|---------------------|---------------------|-------------|---|-------------|
| 2139 | - | GMI2139 | Germania | F100 | IFR | LPPT | - | EDDM |
| 8904 | - | VLE8904 | Volare | A320 | IFR | LFPO | - | LIMC |
| 4513 | - | IBE4513 | Iberia | A320 | IFR | EDDF | - | LEBL |
| 5791 | - | DLH5791 | Lufthansa | CRJ7 | IFR | LFBO | - | EDDF |
| 310A | - | GNR310A | Gambia | B738 | IFR | LEZG | - | EDDM |
| 664 | - | HLF664 | Hapag-Lloyd | B738 | IFR | GCLP | - | EDDM |

OZEO-cb / 26 November 2003

TRANSCRIPT SHEET


Occurrence: GNR310A / GMI2139 of 17.11.2003



| 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> |
|--------------------|----------------------|----------------------|--------------------------------|------------------------------|
|--------------------|----------------------|----------------------|--------------------------------|------------------------------|

Channel: 134.605 Zurich Upper2 Sector Radar

| | | | | |
|-------|-------|----------|---|--|
| U2 RE | 2139 | 18:49:50 | Radar "schönen guten Tag", GMI2139, flight level three two zero, inbound DITON | |
| 2139 | U2 RE | :56 | "schönen guten Abend" GMI2139, you are identified, set course direct to BODAN, then FUSSE | |
| U2 RE | 2139 | :50:02 | BODAN and FUSSE, GMI2139 | |
| 8904 | U2 RE | :51:36 | VLE8904, turn right to DITON | |
| U2 RE | 8904 | :40 | right to DITON, VLE8904 | |
| 4513 | U2 RE | :43 | IBE4513 to BENOT | |
| U2 RE | 4513 | :46 | direct to BENOT, 4513 | |
| U2 RE | 5791 | :51 | Zurich, good evening, DLH5791, flight level three five zero descend level three four zero, course KUDES, thereafter NELLI | |
| 5791 | U2 RE | :57 | "schönen Abend" DLH5791, radar contact | |
| U2 RE | 310A | :53:14 | Radar, good-day, this is GNR310A, level three three zero... to DITON | |
| 310A | U2 RE | :19 | "grüezi" GNR310A, you're identified, set course direct to BODAN | |
| U2 RE | 310A | :26 | to BODAN, 310A | |
| U2 RE | 664 | :31 | swiss "gueten Aabig", HLF664, flight level three four zero | |

Signature of person in charge of transcription : 

TRANSCRIPT SHEET

Occurrence: GNR310A / GMI2139 of 17.11.2003



| <u>To</u> <u>Col.1</u> | <u>From</u> <u>Col.2</u> | <u>Time</u> <u>Col.3</u> | <u>Communications</u> <u>Col.4</u> | <u>Observations</u> <u>Col.5</u> |
|---------------------------|-----------------------------|-----------------------------|--|-------------------------------------|
| 664 | U2 RE | :36 | "schönen guten Abend" HLF664, you are identified, BODAN – FUSSE | |
| U2 RE | 664 | :39 | BODAN – FUSSE, HLF664 | |

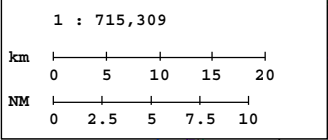
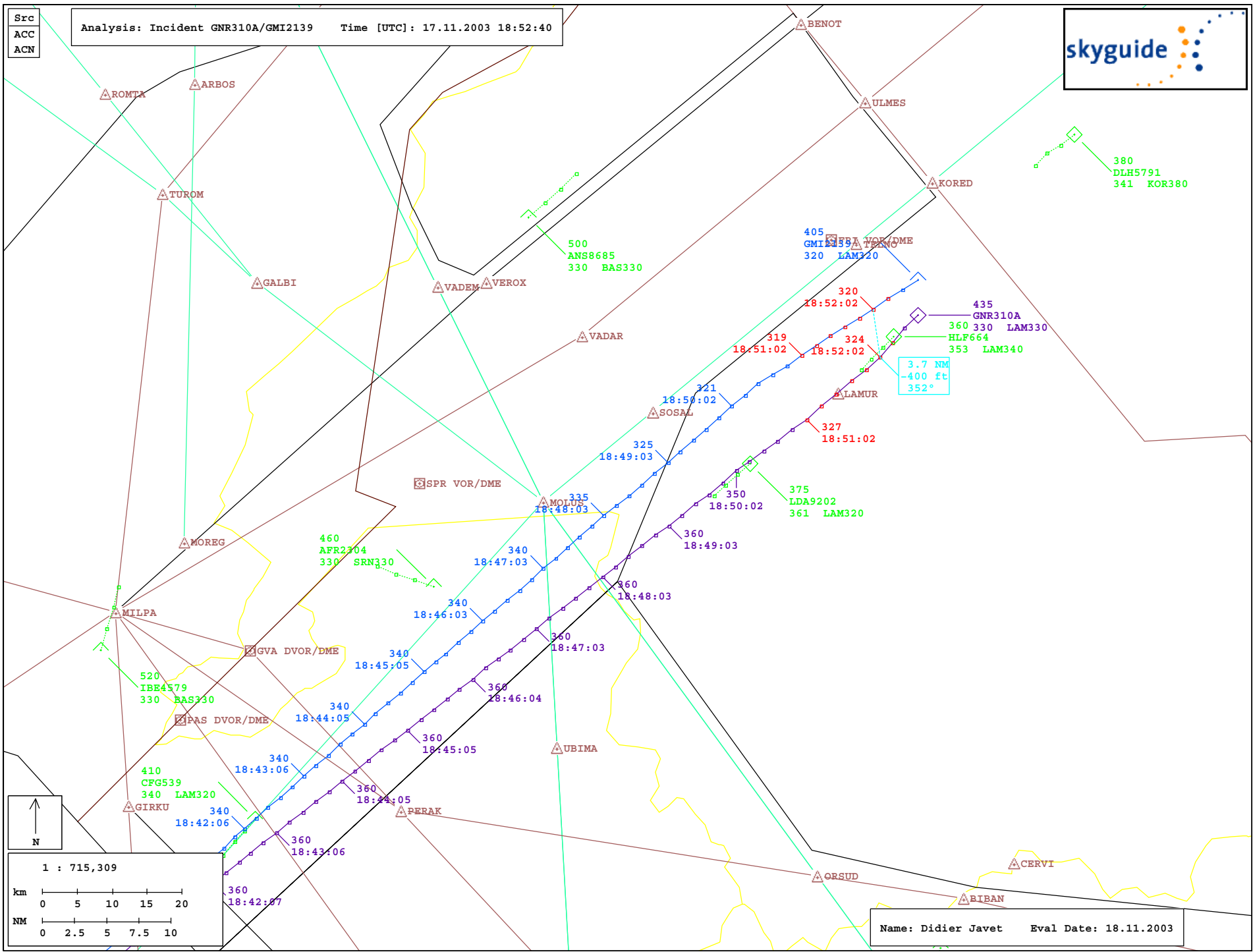
- end -

Signature of person
in charge of transcription :

A handwritten signature in blue ink, consisting of a stylized 'd' followed by a flourish.

Src
ACC
ACN

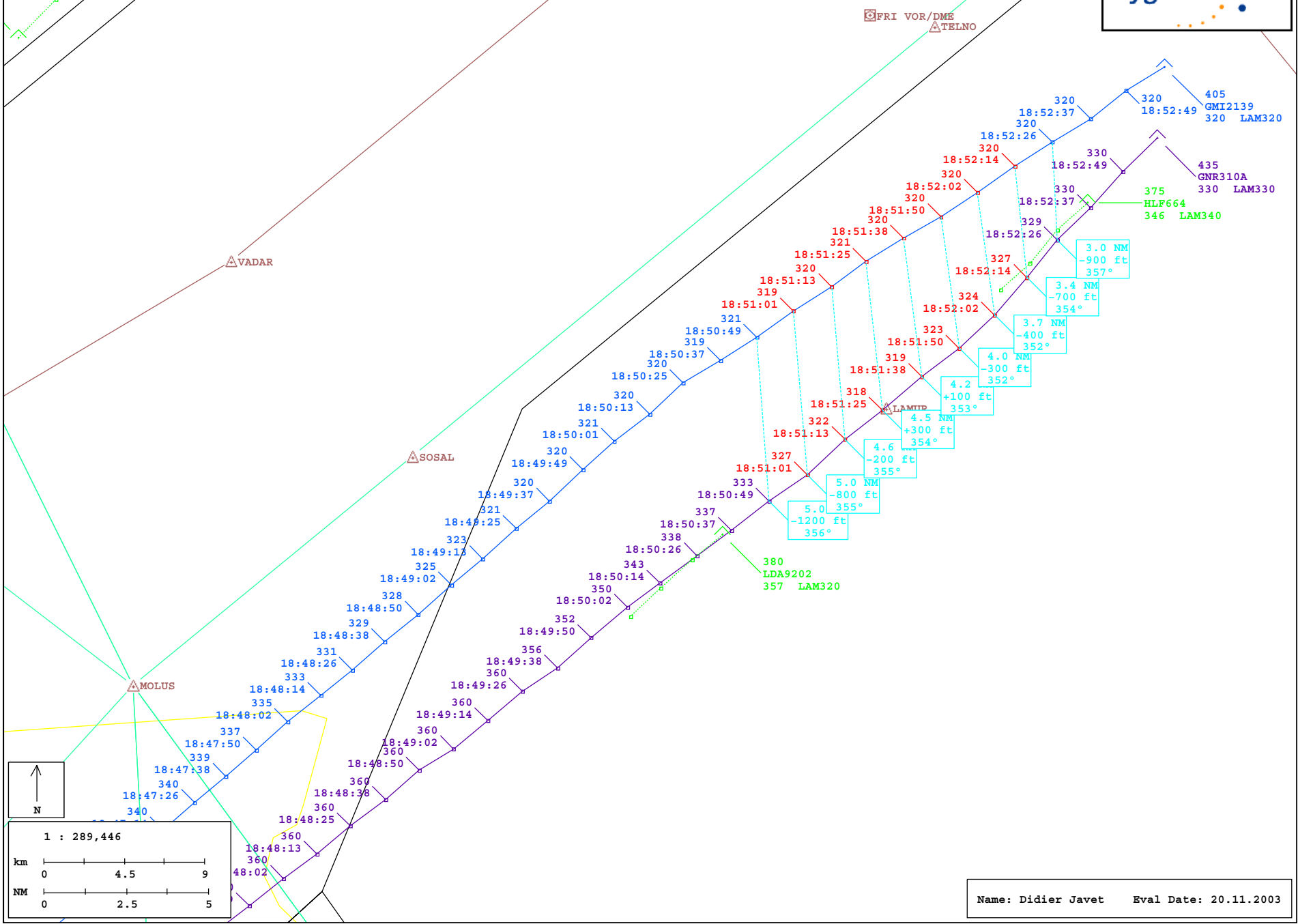
Analysis: Incident GNR310A/GMI2139 Time [UTC]: 17.11.2003 18:52:40



Name: Didier Javet Eval Date: 18.11.2003

Src
ACC
ACN

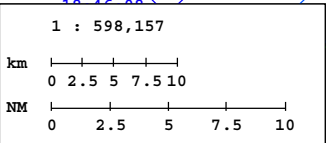
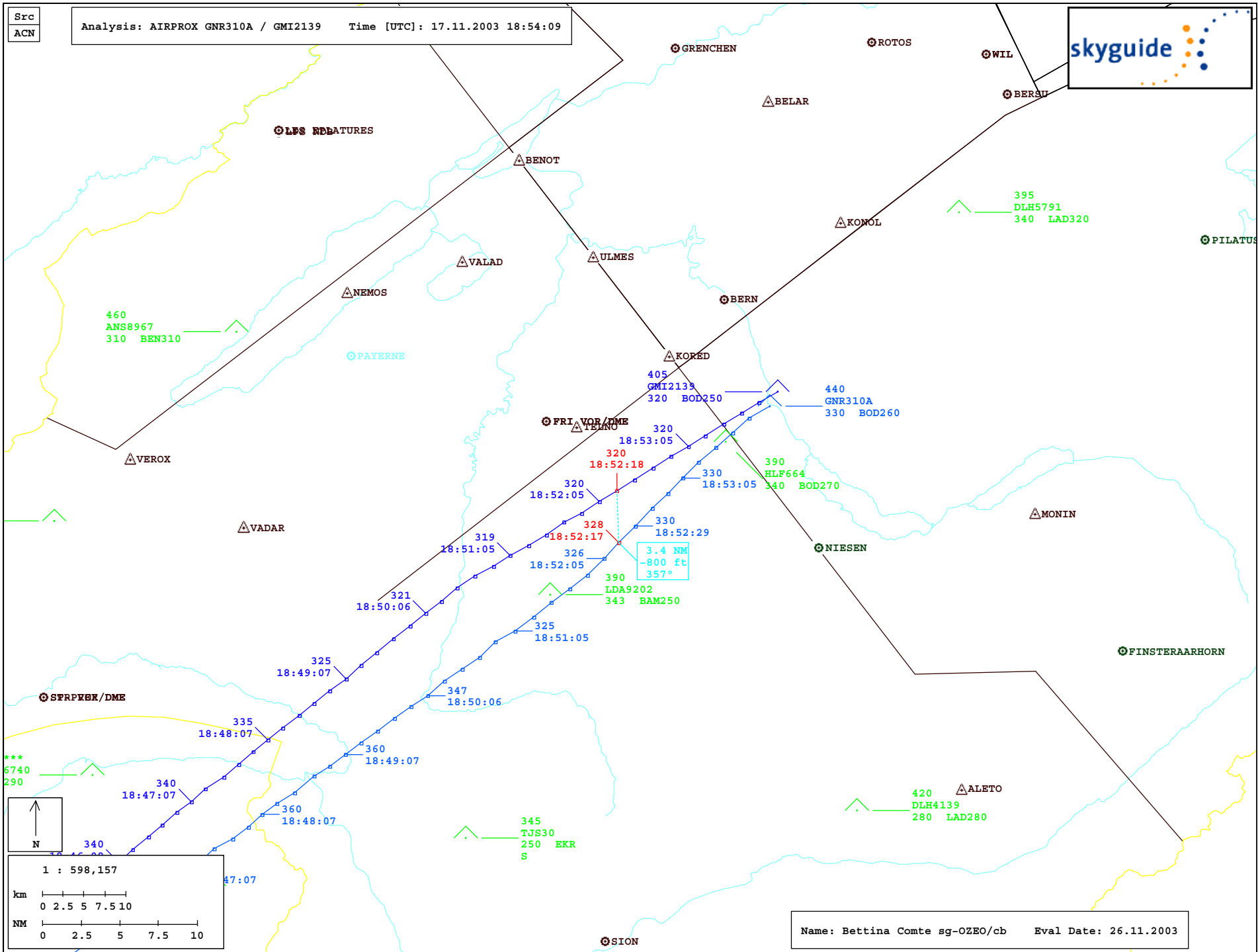
Analysis: Airprox GNR310A / GMI2139 Time [UTC]: 17.11.2003 18:53:06



Name: Didier Javet Eval Date: 20.11.2003

Src
ACN

Analysis: AIRPROX GNR310A / GMI2139 Time [UTC]: 17.11.2003 18:54:09



Name: Bettina Comte sg-OZEO/cb Eval Date: 26.11.2003